ADVANCED MANAGEMENT

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(Complete contents on page 3)

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APRIL 1959
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CONTENTS

Articles

THE PROFESSIONAL MANAGER
by James E. Newsome — 4

A PHILOSOPHY OF MANAGEMENT
by Ralph C. Davis — 5

UNION LEADERSHIP AND BUSINESS REALITIES
by Edward J. Hoechst — 7

MANAGEMENT DEVELOPMENT IS NOT JUST A PROGRAM
by William Hart — 9

WHO ARE THE MENTALLY AND PHYSICALLY HANDICAPPED WORKERS?
by C. R. Walmer, M.D. — 11

EFFECTIVE STAFF MEETINGS
by Max D. Richards — 18

THE GROWING CHALLENGE OF COMPLEXITY
by Walker Cisler — 21

MANAGEMENT SKILLS FOR SCIENTISTS IN SUPERVISION
by James William Caldwell — 22

Features

S.A.M-A.S.M.E 1959 CONFERENCE COMMITTEE — 16

UNIVERSITY DIVISION OBSERVATIONS
by Professor Harold Fischer — 27

NEW MANAGEMENT WRITING
The Advanced Management Library Service — 28

TYPICAL S.A.M CHAPTER ACTIVITIES—MAY 1959 — 29

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The Professional Manager

WE ARE HEARING more and more about "The Profession Of Management" and "The Professional Manager." Perhaps we should reflect a little on what we mean by these expressions.

In William Wickenden's *THE SECOND MILE* he said, "Every calling has its mile of compulsion, its daily round of tasks and duties, its standard of honest craftsmanship, its code of man-to-man relations, which one must cover if he is to survive. Beyond that lies the mile of voluntary effort, where men strive for excellence, give unrequited service to the common good, and seek to invest their work with a wide and enduring significance. It is only in this second mile that a calling may attain to the dignity and the distinction of a profession."

As one searches the authorities for definitions of a professional, he will find over and over again, statements like the following:

> "To be a professional one must be imbued with the motive of service."
>
> "A professional follows a standard of conduct based on courtesy, honesty and ethics, which guides his relations with clients, colleagues and the public."
>
> "The great dream of the professional manager is that some day he will find a way to share with his associates a mutually deep vision of what a truly inspired human organization can achieve."

The doctor, the lawyer, the teacher, is concerned in everything he does—on the job and off—with the impression he is making on the public and its reflection on his profession. Are we as professional managers showing a like interest in our public image, or are we satisfied to let others create that image for us no matter how distorted or unrealistic it turns out to be? Certainly we must create our own image if that image is to truly represent us.

For most professionals there is an organization devoted to their advancement through publications, conferences, and study groups. Such organizations are equally conscious of the profession's obligation to society. We like to believe that the Society For Advancement Of Management is the professional organization for Professional Managers.

We feel that our society offers professional management an opportunity to sharpen its techniques, to remain abreast of new developments in the science of management, and to learn through association with others in like positions. We feel that our society, through its many chapters, can have a healthy influence in presenting to the public a true picture of the professional manager as a citizen in the community, as well as a competent operator of a business enterprise.

James E. Newsome
S.A.M National 2nd Vice President
and
Production Manager
Johnson & Johnson
Chicago

A Philosophy Of Management*

by Ralph C. Davis
The Ohio State University

THE TERM "philosophy" means to the undersigned a body of related knowledges that supplies a logic for effective thinking for the solution of certain kinds of problems. A management philosophy supplies the basis for the solution of business problems. An executive without a philosophy can have only limited capability for creative thinking, regardless of his basic intelligence. The development of a sound philosophy of management for oneself is, consequently, the most practical self-developmental project that an executive can undertake.

The following is a highly condensed statement of the basis of a management philosophy that has been helpful to the undersigned. It has been suggested that it may be helpful also to executives and students in developing management philosophies of their own. It is with this purpose in mind that the following statement is made:

1. This management philosophy is based upon the right of private property and the concept of a "free" market economy. It is, accordingly, a philosophy of economic decentralism. This philosophy tends to be opposed, therefore, to:

a. Philosophies of socialism,[1] since they are basically philosophies of economic and political centralism that tends to diminish the freedom of the individual and the exercise of individual initiative.

b. Centralized controls of the economy by central government beyond the necessary minimums, since these weaken the right of private property.

c. Monopoly, either of capital or labor, since this monopoly tends to destroy a free market economy.

d. Any measures designed to prevent the formation of private capital, without which there can be no system of private capitalism.[2] These measures include confiscatory taxation, social pressures that are exerted deliberately to promote "dissaving," "planned inflation," and various others that tend to prevent private capital formation. Such measures lead to the substitution of state capitalism for private capitalism and the development of a socialist economy. A "free" market economy can only operate effectively under a system of private capitalism.

2. This philosophy emphasizes the prior obligation of private enterprises and their owners and employees to contribute significantly to a standard of living that is being augmented continuously through time. It is based, therefore, on the concept that the primary objectives of the business organization are those economic values that are needed or desired by its customers. This is, accordingly, a philosophy of economic service by private enterprise to the public interest.

3. The acceptance of this service obligation by owners and managers is necessary for the validation of the concepts of private property and private profit. It is not necessary, however, that this acceptance be completely voluntary. It is sufficient that it be accepted under the duress of competition and a minimum of supporting governmental regulation. This philosophy recognizes that an earned profit depends on a prior, competitive accomplishment of a company's service objectives. Accordingly, this is a philosophy of intelligent selfishness.

4. This philosophy commits owners and managers to the active promotion of social and economic progress. It is accordingly a philosophy of progressive conservatism:

a. It does not sanction attempts by owners or managers to "turn back the clock," since it recognizes the economic and social obligations of private ownership to contribute to progress in an expanding economy. It is therefore not a reactionary management philosophy.

b. This philosophy does not sanction attempts by politicians or academic theorists to bet the fruits of past technical and managerial achievements of private enterprise on the nose of some untested economic, political or social hypotheses. Accordingly, it is not a radical management philosophy.

5. This philosophy recognizes the importance of big rewards for big results. It does not seek to chisel away the fruits of success, whether they be in the form of profits, bonuses, incentive pay, salaries, wages, fringe benefits, or various intangible values, provided that these are earned under competitive conditions. It is, accordingly, a philosophy of positive motivation. This philosophy recognizes, therefore, the validity of the profit objective in private enterprises, on the basis of:

a. The concept of a profit as a reward of private capital for the successful acceptance of business risk in the rendering of an economic service under competitive conditions in a free market. The hope of gaining a profit is the principal stimulus that motivates investors and entrepreneurs to risk capital for the purpose of expanding old businesses or founding new ones. This philosophy recognizes, consequently, that a profit is the principal objective of the businessman, even though customer service is the primary objective of the business organization.

b. The concept of profit-making as a necessary function in the processes for the formation of private capital. The growth of a business, and the growth of the Economy, depend greatly on the ability of Management to "plow back" a substantial proportion of its profits for purposes of expansion.

6. No organization can be better than its leadership, over a period of time. The work of management is the work of executive leadership. It is the mental work of planning, organizing, and controlling the activities of others in the

** This statement is a further development of some previous statements of a philosophy of management by the author. It is based on a statement published in December, 1958, by the Academy of Management.*

joint accomplishment of a common objective. This common objective, in the case of the business organization, is service to the customer through the organization and its leadership. Each line or staff component of a business organization has its service objective accordingly. The executive head of an organizational component is or should be accountable for the accomplishment of its objectives. He must have the rights of decision and command that are necessary for an accomplishment of these objectives as well as those necessary for effective leadership anywhere. The executive has also the concomitant obligations of leadership. This philosophy recognizes, however, that an uncontrolled exercise of executive authority is neither in the public interest nor in the interest of private enterprise. It is a leadership philosophy in this respect.

7. This philosophy also emphasizes the importance of confidence in the purposes of executive leadership as a basic factor in the development of good organizational morale, and in the maintenance of sound business relations of all kinds. It emphasizes, therefore, the importance of ethical principles in the formulation of business policies. It is a moral philosophy in this respect.

8. This philosophy requires the recognition by owners and managers of labor's right of collective bargaining. It recognizes also the corresponding obligation of labor—the obligation to support management's right of executive leadership in the accomplishment of customer service objectives, when a satisfactory labor contract has been accomplished without the exercise of duress by either party. This is a labor-management philosophy in part.

a. It recognizes that the loss of a property right in one's services is coincident with or follows the loss of property rights in one's goods. A denial of the right of collective bargaining, and its concomitant right to organize, leads to socialism. The socialist state owns or controls the means of production. These means include operative labor and management, as well as land and capital. There can be no true collective bargaining under socialism.

b. It does not recognize any right of labor to a profit share because of the service obligations set up in a contract of employment. One cannot sell one's services, and retain title to them at the same time. It does recognize the right of capital to dispose of its profits or losses in any legitimate manner.

9. This philosophy emphasizes the concepts of delegation, decentralization, individual initiative, and individual accountability. It recognizes the obligation of the indivdual to contribute to the accomplishment of the primary service objectives of his organization, as well as his right to a reasonable satisfaction of his personal objectives. It emphasizes the importance of the individual, while recognizing the importance of group coordination and cooperation. In this respect, it is a philosophy of individualism.

10. This philosophy breaks down the problem of management in a free-enterprise economy into its basic elements. It analyzes the principal factors, forces, and effects in the management process. It develops a logic of effective thinking, in terms of business objectives, policies, functions, factors, and relationships, that is applicable to the solution of managerial problems anywhere. It is a scientific philosophy of management in this respect.

It is believed that any sound philosophy of management in a free enterprise economy must meet the above requirements.

There has been a continuous erosion of the right of private property over the past twenty-five years, or more. This has been a necessary effect, to some extent, of a rapid growth in the size and complexity of our Economy. It has reflected, in part, a distrust of business owners and executives, because of earlier abuses of economic power. It has been an effect, to some extent, of the successful attempts of some politicians to get themselves elected by promoting the short-run interests of voters at the long-run expense of the Economy. It has been an effect, to some extent, of the attempts of some individuals to promote a socialist economy.

It is a responsibility of American Business Leadership to take every legitimate step that will assure the adjustment of our "free enterprise" system to the changing needs of a growth economy. It must adjust its methods to changing political and social concepts when these changes do not weaken seriously the right of private property. It cannot compromise this responsibility because the right of private property underlies the liberties of the private citizen. It must oppose these changes when they do. Most employers' associations attempt to discharge these responsibilities by means of lobbying activities. Lobbying is a legitimate exercise of a constitutional right of petition. It is also a "rear-guard" action for the protection of the right of private enterprise. Continuous lobbying suggests, therefore, that the forces of private enterprise are continuously in retreat. Observation of the passing scene over the past twenty-five years suggests that this has been the case. One cannot win a campaign while one is continuously on the defensive. Business Leadership cannot go on the offensive successfully until it has developed a simple statement of a management philosophy that is in consonance with the public interest. It cannot go on the offensive then, until the particular philosophy is known, understood and accepted by the public. The political climate would change, obviously, if this were to happen, and fast.

Many able executives and management scholars have published statements of management philosophies recently. There is a direct relation between a sound management philosophy and a community of ideas concerning the basic requirements for a successful operation of a system of private enterprise. It is suggested that these statements represent some recognition of this relation. It may be that none of the published statements will do the job that must be done. It is quite certain that out of them will come some statement that will. Such statements are a response to a vital need of the times; measures for the preservation of the free enterprise system, and the right of private property on which it rests.

Ralph C. Davis

Columbus, Ohio
February 28, 1959

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1. *As used in this paper, the term socialism refers to any economic, political, and social system under which the means of production are owned or controlled by the State for the purpose of assuring a condition of production and distribution of goods and services that is thought to be "fair" by the political leaders of the State. It is based on a right of public property, rather than a right of private property. It is evident that a particular condition of socialism can exist anywhere along a continuous spectrum of varying degrees of "socialism".*

2. *"Private capitalism" refers to any system for the production and distribution of goods and services in which the capital provided is the private property of citizens of the State or of corporate entities created by the State. It is not the property of the State. The productive process in an industrial economy is based on a cycle of conversion of capital into values that can satisfy consumer needs or desires. Consumer payments for these satisfactions complete the cycle of conversion, returning it once more to some form of capital. The use of capital in the productive process under a system of private capitalism is not controlled by the State, except as the economic, political, and social activities of private enterprises must conform to public policy.*

Union Leadership And Business Realities

by Edward J. Hoechst
Manager, Employee Relations
ARMA Division
American Bosch ARMA Corp.,
New York

UNIONS representing 85% of the employes at the Arma Division of American Bosch Arms Corporation at Roosevelt Field, Long Island, in December 1958, formally signed new contracts running until October 1961.

The signing was a quiet, polite affair. But there was much more behind the usual handshakes and reserved platitudes; it was a red letter day for Arma labor-management relations for more than one reason.

In the first place, the unions had agreed to new contracts *nine months* before current ones expired. And secondly, it was the first contract inked by Arma engineers and technicians' I.U.E. Local 418, AFL-CIO *without a strike* since their organization as a union in March 1951.

Behind this amicable atmosphere is a story of how a sophisticated union leadership can appreciate the business realities of our economy. It is a case in point of what happens when a company takes a fresh look at its labor problems and learns from past experience.

A major step in this changed outlook took place in 1954 when Charles W. Perelle was called in to head Arma Division's parent company, American Bosch Corporation. Perelle quickly set up a new corporation, American Bosch Arma, and began recruiting new personnel and ideas to get better labor relations. But time ran out on him in 1955 when crucial contract negotiations began in early summer.

Before the new management's policies could take effect, a strike occurred—an occurrence which most Long Islanders shrugged off as routine news. From the end of September until after New Year's Day 1956, the Roosevelt Field plant was a ghost establishment guarded only by a thin line of pickets and plant guards. The loss of its better than $2,000,000 monthly payroll for over three months was felt in thousands of homes across Long Island.

Arma people from supervisors down to cleaners went through a grim Thanksgiving and Christmas '55 holiday season.

Two years before, in the summer of 1953, the plant had been ringed with strikers again. When its management attempted to stay open despite the picket lines, violence swept about the plant as strikers jostled non-strikers seeking admittance. A 250-man police force battled the strikers and photos of Arma pickets fighting Nassau County policemen appeared in newspapers across the nation.

Earlier, in December 1951, the newly organized Local 418 went on a week-long strike to enforce its demands. At the time, Arma Division was located at its Brooklyn plant.

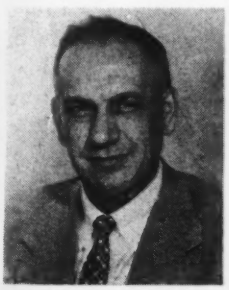
What caused all of this labor strife? The answer is not simple.

For one thing the leaders of all three unions agree that monetary considerations have never played a large part in the strikes. Arma employes enjoy comparable pay with other electronics firms in the East and its engineering people are among the highest salaried in the industry.

Arma's labor troubles stemmed from a variety of things: confusion in negotiations, lack of communcation between labor and management, and general poor faith in bargaining. In contracts signed during the Korean War era, the Division granted monetary items at prohibitive cost; still, bargaining bogged down over non-monetary clauses.

In both the '53 and '55 strikes the Division sought to eliminate high cost items under its contracts in order to reduce expenses following a general cutback in defense orders, its only business. Union leaders met these proposals with a collective "No" and strikes were called.

Now a new era in labor relations has been opened at the Roosevelt Field plant. What has happened since the rough and tumble relations of a few years ago?



Mr. Hoechst's extensive experience in business and industry includes the positions of Assistant Manager, Labor Relations, Bell Aircraft (1942-46), Personnel Director of Penn Controls (1946-48), Vice President and Director of Industrial Relations for Selby Shoe Company (1948-55), and Director of Industrial Relations for Fieldcrest Mills, from 1955 until he joined ARMA in 1956. He is active in many community projects and has been Director of numerous Civic and Service Boards.

The minute you say that a thing cannot be done you are through with that thing, and no matter how much you know—even if you are an expert—if you say it can't be done you are all through. And someone knowing nothing about it, but thinking it can be done, now is a better man for that job than you are.

Dr. Harry Myers

Training classes were a partial answer to better prepare Arma supervisors for their jobs as bosses and as representatives of management. A corporate-wide newspaper for all employes had its beginning in May '56 as a means of improving communication between the Corporation and Divisions, and employes on all levels. During this period, the author joined the Division in the early summer of '56. An immediate attempt was made to establish friendlier relations with union leaders although contract terminations were two years away.

ACTUALLY the unusual early signing of contracts started inadvertently, when the author requested a meeting with Local 418 to modify certain provisions of its contract on an out-of-plant-service pay.

Under its inertial navigation system program for the Air Force's Titan ICBM, Arma is required to staff facilities at the Denver, Colorado, plant of The Martin Company, prime contractor for the production of the Titan, and at Patrick Air Force Base, Florida, where the Titan would be flight tested eventually at Cape Canaveral.

Air Force controllers, however, had informed Arma that remuneration for reassignment of Arma engineers, technicians, and machinists was too high and not reimbursable under AF contract provisions. This meant that such money must come out of Arma's profits directly.

Arma was faced with the alternative of subcontracting such outside work or getting the unions to change their contracts to conform as a reimbursable expense under AF contracts. So the author called in Local 418 leaders for a meeting.

"We knew we had a stake in this work," said Sanford Lenz, Local 418 president, "as engineers and technicians the fellows took pride in their product and wanted to see it through from the drafting table to the missile. We didn't want any outsiders taking over at Denver or Cape Canaveral."

After a few preliminary meetings both the author and Lenz saw that this contract item represented the only big issue in new contract negotiations. Further discussion found a meeting of minds and a decision was made to open negotiations under a limited agenda if Locals 460 and 464 were willing to go along.

"By avoiding incendiary issues such as, for instance, our demand for a union shop," Lenz recalled, "we found we could come in with our next-to-last proposals and get down to brass tacks without shadowboxing for weeks."

Informal talks with Owen Hoey, Local 460 president, and William Griffin, Local 464 president, got a tentative approval of early negotiation, pending consent from I.U.E. headquarters.

"So at the convention last summer, Bill, Sandy, and I sat down with I.U.E. fellows and laid the facts on the table," Owen Hoey said. "With layoffs in other Long Island defense companies making news every day our members knew that anything we could do as a union to stabilize labor relations would give us more job security by making Arma more attractive for new defense business."

When put to a vote before the members of all three unions, early negotiations were approved. From there, meetings from late October through November were conducted by the author and the three unions concurrently. Side issues were avoided as both parties kept their remarks within the agreed agenda.

Proposals submitted by individual unions were realistic. For example, Local 460 asked for a 3-3½% general increase each year of the new contract and settled for a straight 3%. Local 464 came in with a 5-4-4% pay increase proposal over the three years and settled for a 2½% increase each year and increases to eliminate so-called "inequities" in certain jobs. Vacation demands by all three unions were equal or less than what the Division granted in the final proposal.

Other contract changes involved improvements in sickness and accident insurance and other Division-financed benefits.

All three union leaderships urged ratification of the contracts when presented to the members in early December. The vote was overwhelming in Locals 418 and 460, and substantial for the contract with Local 464.

In summing up the feelings of his union of 1200, Lenz said, "Our jobs as engineers and technicians bring us very close to Arma's problems and we fully appreciate that anything that is good for the Division is good for us, both salary-wise, security-wise and professionally."

"From past experience we know that certain clauses in our contract are tough to agree on and realize that this isn't the time to ask for changes," he added. "So, by postponing these, we came up with a contract that we can live with and which will provide a stable labor situation at Arma."

Owen Hoey, Local 460 president whose union represents 2300 production and maintenance workers, hoped that the early signing meant a return to peaceful relations of earlier days. "Early negotiations took the pressure off our meetings as there were no strike deadlines and other disturbing factors," he said. "We got what we wanted, a pay increase and longer vacations for service, and Arma got a contract until 1961. We feel we've done our part in encouraging new business, now it is up to Arma management to go out and bring in that business."

SPEAKING for Local 464, which represents 600 draftsmen, office, and clerical employes, William Griffin observed, "Our biggest concern was to make the meeting brief and to the point. With a contract expiring next October, these meetings could have dragged on for months. When the management came in with proposals that were promising, we were able to negotiate realistically."

In the shops, laboratories, and offices individual employes expressed the views that the early signing would mean more job security, would mean a bigger role for Arma in the nation's booming missile program, and a steady rising income for them at their jobs. There was a noticeable uplift in morale following announcement of contract agreement, particularly among older employes whose memories of Arma strikes were still fresh.

All of them felt that at last Arma labor-management relations had turned the corner on a new future. ■

Management Development Is Not Just A Program

by William Hart

Director, Organization & Management Development
Crown Zellerbach Corporation
San Francisco, California

SINCE World War II, hundreds of U.S. firms have polished up an old tool that has been in industry's tool shed for decades. It is called "management development."

Always an important key to business success, the concept of management development is only now being placed in its proper perspective. Currently, it is the most popular subject for speeches, for business publication articles and at seminars. It is discussed with ever increasing frequency in intra-company management and top executive sessions. For reasons often stated, business people are not only aware of it, they are concerned about it. Today, management development is enjoying a renaissance.

Systems for management development are almost as numerous as the people trying to solve the problem. Everyone has his own pet formula for growing a bumper crop of executives. I am no exception. Most of us are thoroughly convinced that our solution is the very best. But few of us will agree with each other. Our would-be disciples, however, have one point of agreement—they are all confused. They keep hearing that this plan or that plan is a sure-fire formula for management development when instinct tells them that there is no single formula.

It must be remembered that in management development we are dealing with individuals. Further, we are not concerned with the average man. Rather, we are working with those in the upper segment of the Bell Curve that represents all working males, the most firmly individualistic of the entire group. A formula, therefore, to be successful must be based on principles so fundamental they are applicable to all. For example, we might start with the following three basic principles: 1) A man has to develop himself; 2) A man learns best by doing; 3) A man's growth and progress must be recognized.

Consider the first of these. As some ancient sage advised teachers on schooling: "*You* can teach, but it is the *pupil* who has to learn." Children can study books all day and learn nothing for sheer lack of interest, then turn right around and become an expert in an amazingly short time on a subject they enjoy. Their interest is the incentive for self-development. After formal schooling, the situation remains the same—there must be incentive.

With adults in industry it would seem that the desire to advance would provide a built-in incentive. For some, this is the case. For most, however, it is not. Additional help is needed to get them off dead-center. Either they do not know how to get started or they get so involved in their daily chores that they lose sight of the necessity for growth and development as requirements for advancement.

Here we have defined a job for management development. It must create an atmosphere which will stimulate the individual to develop himself. If it cannot give him the knowledge, it *can* give him the incentive for obtaining that knowledge.

A well conceived appraisal plan can be most helpful in this respect, particularly if it is designed to produce a development plan. The nature of the appraisal plan which would be best for any situation is contingent upon the conditions in the company using it. A plan tailored to meet the following simple requirements will do.

MR. HART joined Crown Zellerbach Corporation in 1947 as General Personnel Supervisor. In 1952 he was made Director of Management Development. In 1955 he assumed his present title. From 1930-40 Mr. Hart was with the Selective Service National Headquarters, concluding that assignment as Assistant Deputy Director. From 1930-40 he held various staff and operating positions with Crown Zellerbach Corporation in Camas, Washington. He was with the Hart-Wood Lumber Company from 1926-30, operating, buying and selling. He is a member of the Air Training Command Advisory Board and has been awarded the Legion of Merit, Army Commendation with Oak Leaf Cluster.

A formal system for the careful consideration of suggestions from employees is one of the most rewarding activities in the field of management. A suggestion system adds to the constructive thinking of the organization and makes for an alert, thinking management.

Harold Engstrom
From the Foreword of SUGGESTION PLAN GUIDE

It must be natural and easy for those who will use it. It must be one they can understand and accept. A management conference speaker once said that you can have an appraisal program if you have no more than a blank piece of paper and a pencil on your desk. All you need do is take time to write down the strengths and weaknesses of your employees. I believe this. Simple as it is, an appraisal program of this sort is better than an involved one which is neither understood nor accepted by those using it.

TO BE effective, an appraisal plan must have built-in guards against personal prejudice. Group deliberations are frequently used to provide that assurance. They are normally successful if informal discussions of performance are customary in the organization. If this is an unnatural process, some other more natural method should be provided as the safeguard against prejudice. Naturalness in a healthy organization will assure acceptance both by the appraisors and the appraised. Certainly these are requisites for the stimulation of self-development.

So much for the first of my fundamental principles of management development. The second principle, again, is that man learns best by doing. Recently, an extensive study was made of the problem of management development, professors, consultants and business men participating. After months of deliberation this group reached a number of conclusions, one of which coincided with our premise, but was stated differently. They were more specific; in essence, they said you learn to *manage by managing*.

A large national firm tried a different approach. They interviewed successful business men asking them what in their careers had helped them most to advance to their present positions. Naturally, the interviewers got a lot of different answers, but there were four responses common to all. Three are pertinent to our point: 1) each man, early in his career, was given full responsibility for something; 2) each man had experienced a wide variety of work assignments; 3) each man reported that some time in his career he had been given a special assignment which required a study and recommendations, and in doing it he had gained a better understanding of the over-all company as an integrated organization.

Consider these three points. First—early experience with responsibility. Who can give an employee this? His boss. Responsibility comes to a man only through his line superior.

The second point related to variety in assignment. These, too, come from the line superior.

Finally, special assignments also come from a higher line authority.

Does it not then follow that the most important accomplishments of management development will occur in the daily line activities of any organization unit? Systems and methods which will implement management development in a given organization can, perhaps, be set up by specialists. But the responsibility for the opportunity for actual vocational growth of any employee rests squarely with that employee's supervisor. For this reason, each supervisor must be thoroughly cognizant of his responsibility to develop his people. It must be so deeply ingrained that it is second nature to him. His first concern is to see that the job gets done. If he is also to carry out his responsibilities for development he must be so thoroughly aware of his obligation that it will instinctively guide him despite other overt pressures.

My third principle of management development is that a man's growth and progress in his job must be recognized. This is particularly important because it is what every employee has a right to expect from management development. In addition to this, a real chance for advancement stimulates the employee's desire to grow. Finally, this recognition of a man's progress leads to the ultimate purposes of management development which are continuity and effectiveness of the management organization.

To implement a policy of recognizing growth through advancement, provision must be made to assure that all qualified candidates for each opening receive consideration at the time the opening occurs. In small companies no particular record system would be required. In the larger ones, particularly those which are wide spread geographically, a method of cataloging potential candidates and relating them to the various possible avenues by which they can advance, is recommended. Requisite also is a practice of consulting that information when vacancies occur.

A well organized system for reviewing all possible candidates for open positions bears fruit in two ways. First, it provides a greater reservoir of qualified employees from which to draw, and, second, it functions as a morale booster for employees. They know their efforts on behalf of their company are not being overlooked. They are assured of not being lost in the shuffle. They will not feel the necessity of wasting much of their productive time blowing their own horn.

This whole business of management development should not be regarded as a program. The word "program" to most of us means something that has temporal limits. It also connotes a planned and concentrated activity. Management development cannot be handled on this basis. It is not a shot in the arm affair. Rather, it is a continuous thing which must become part of the spirit of an organization.

MANAGEMENT development involves all that goes into making up the climate in which we work. Hiring practices are part of it. So are many of our operating policies. Some that immediately suggest themselves are salary policy, promotion policy and the policy or philosophy of organization. All of these contribute to the creation of a climate for management development. And they are not programs. They are continuous parts of our daily way of business life.

To me the theatrical tradition typifies this point. A theatrical troup also has some of the characteristics of a small business. What happens when a key member of a theatrical cast is stricken? An understudy is ready to step into the role for the "show must go on." That is the tradition of the theatre—the climate of show business—and that climate is probably the one thing that makes it possible to have an understudy ready.

Then, can we conclude that management development is part and parcel of daily operations, in a company large or small? Any company, regardless of size, can produce a climate for development. No company, large or small, has an option on the proper spirit. ■

Who Are The Mentally And Physically Handicapped Workers?

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Industry's problem with regard to the handicapped worker is receiving attention from many sources. In today's highly specialized industrial operations a physical handicap can sometimes be an asset rather than a detriment, as surveys have shown. The problem, from Industry's point of view, is to place the handicapped employee in a job which he is entirely capable of handling. How this can be accomplished is discussed in this article.

It is difficult to arrive at an exact delineation of the mentally and physically handicapped. Most simply stated, the group includes all who do not possess full physical or emotional capacities. This broad classification, of course, immediately places every one of us in that category, since every individual is limited in some way for certain activities or accomplishments. Yet I am sure that few people would consider themselves "handicapped" because they lack the equilibrium or steadiness of nerves to rivet girders high on a bridge, or do not have the aptitude to solve complex mathematical equations. We simply say that we "just aren't cut out for that sort of work."

The key to the definition, then, must lie in the word "handicapped," which means a disadvantage that renders success more difficult. Viewed broadly, however, this meaning answers nothing, since theoretically we are all at a disadvantage on a particular job if we do not fill the requirements to handle that job, whether it is because of physical or mental limitations, lack of training, or even lack of interest.

STATISTICAL PICTURE OF THE PHYSICALLY HANDICAPPED

The popular conception of a handicapped person is one who is blind, deaf, crippled, an amputee, an epileptic, an inmate of a mental institution, a victim of tuberculosis, arthritis, cerebral palsy. Yet our eyes cannot tell the whole story. The American Federation of the Physically Handicapped in 1954 set the number of severely handicapped—that is, those with 60 to 100% physical disability—at from 7 million to 9 million Americans of working age, but estimated that there are at least 30 million others who are handicapped to a lesser degree. Each year the ranks of the severely handicapped swell by some 250,000. The National Safety Council's 1954 report stated that more than 9 million other injuries resulted in temporary total disabilities for that year.

Intensifying the problem is the fact that the number of aged in the United States is increasing rapidly. Medical developments in the past 50 years have increased average life expectancy from 49 years to nearly 70 years of age for men, and to about 74 for women. This result means a shift in the age grouping of the population. In 1900, 17% of the population in our country was 45 years of age; by 1960 this will have doubled. There will be 60 million people 45 years of age and older, and 21 million people 65 years of age or more, all with diminishing physical and mental capacities.[1]

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[1] *Covalt, Donald A. "A Problem for the Patient, Physician, Management and the Community." Transactions of the 19th Annual Meeting of Industrial Hygiene Foundation, Nov.* 1954, *Transactions Bulletin No.* 28, *p.* 53.

While disability is no respecter of age, with certain diseases hitting hardest at specific age groups, nevertheless the greatest amount of disability is found among older persons. In a 1949 survey of disability reported by the Office of Vocational Rehabilitation, 39% of the 2 million persons aged 14 to 64 whose disabilities had lasted 7 months or longer were 55 to 64 years of age. On any given day, one in every 7 men and women aged 65 or more is disabled, and 4 out of 7 of those (8% of all aged persons) are disabled because of major chronic diseases or impairments. Their disability rate is about 2½ times as large as that for the total population.[2]

INDUSTRY'S problem with regard to the handicapped is obviously broader than the question of whether to hire the applicant with visible defects and of what to do with him on the job. If only the severely disabled group of over 7 million are considered, our thinking must still be modified. In today's highly specialized industrial operations, a physical handicap can often be an asset rather than a detriment. For example, a deaf man could work comfortably in a noisy environment or concentrate on an exacting job without strain, and a blind man could do work requiring sensitive touch much more rapidly and accurately than a man with normal eyesight. The problem in many cases disappears when the handicapped worker is placed on a job which he is entirely capable of handling. How this can be accomplished, the company policies and the economics involved varies in individual companies. I will only attempt here to describe the scope of the problem.

Who are the mentally and physically handicapped workers? How can they be distinguished from those in the working population who come closer to being free of such limitations? How can we cut down on the number?—as cut down we must for the social and economic well-being of our nation and the survival of industry as it functions today.

For the purposes of this discussion we will eliminate the comparatively small group of people who are almost completely disabled and those in mental institutions, since they seldom are projected on the industrial scene. Our attention will be directed to:

(1) Those requiring rehabilitation: the millions of workers and prospective workers who have lost their basic skills through accident or illness; others who could, with proper treatment and training, lead economically useful lives; and the aging workers.

(2) The millions of workers who have physical weaknesses which must be carefully considered when job assignment is made.

(3) Those millions more who are suffering from psychoneuroses or whose maladjustments to life's situations may cause them to break down mentally or physically under stress.

Let us first consider those individuals for whom the problem of a physical handicap already exists and who require rehabilitation or special placement.

Main causes of disability among Americans, according to the Office of Vocational Rehabilitation, are chronic disease, which accounts for 88% of all disabling conditions and includes such maladies as heart disease, tuberculosis, mental illness, multiple sclerosis, Parkinson's disease, epilepsy, diabetes, cancer, cerebral palsy, arthritis, and various eye disorders; occupational accidents, which account for 5%; home, highway and all other accidents, 5%; and congenital conditions, the remaining 2%.

It is estimated that among the severely handicapped there are 1,500,000 arthritis cases, 200,000 multiple scleroses, 82,500 paraplegics, 400,000 amputees, 500,000 hemiplegia cases, and 870,000 potentially handicapped heart disease sufferers.[3] According to the American Heart Association, last year heart disease alone caused the loss of more than 2 billion dollars in wages and 170 million man-days of work. One of every 15 or 16 Americans is hindered in some degree by heart disease from living a normal active life.[4] The number of people in the United States with hearing deficiencies has been placed as high as 10 million. Those in the normal working force total 239,000. There are 319,000 sightless Americans and 1 million who are blind in one eye.[5]

The Civil Service Commission considers persons with the following defects to be permanently handicapped but capable of rehabilitation: amputations or other orthopedic deformities; hard of hearing or deaf; blind; color blindness or faulty depth perception; arrested pulmonary tuberculosis; compensated heart disease.[6]

REHABILITATION OF THE PHYSICALLY HANDICAPPED

Working on the premise that the physically handicapped are not necessarily occupationally handicapped, numerous federal and state vocational rehabilitation agencies and private institutions are hard at work returning the crippled and disabled to economically useful lives. Federal funds have been made available to the state agencies for rehabilitation services, for physical facilities and for training of specialists in that field. Long-range legislation recommended by President Eisenhower has been passed to make this action possible, and the President's Committee for the Employment of the Physically Handicapped has been accomplishing a great deal toward paving the way for the handicapped in the business community. The American Federation of the Physically Handicapped, founded in 1940, has been instrumental in uniting the efforts of the many groups active in programs for the handicapped and in improving the economic status of the handicapped. Through the efforts of this group, National Employ the Physically Handicapped Week was initiated and authorized by the President of the United States in 1945, and this project has achieved excellent results in calling attention to the situation.

ENTHUSIASTIC as such activities have been, the over-all program still falls short of a satisfying goal. Through the efforts of the State-Federal Vocational Rehabilitation Program, more than 60,000 disabled workers found jobs in industry in 1954, but the AFPH says that 4 million, or over half the severely handicapped, could be added to the working population through rehabilitation. The President's Committee for Employment of the Physically Handicapped reported that, from January 1, 1940 to July 1, 1952, the federal-state employment services placed 2,400,000 physically handicapped workers in non-agricultural occupations. Four billion more man-hours could be added to the work force annually through rehabilitation and re-training.

The Office of Vocational Rehabilitation reports that there are about 2 mil-

[2] *Office of Vocational Rehabilitation. "What are the Facts about Disabled People in this Country and What can be Done for Them through Rehabilitation?" Jan.* 1955, *p.* 2.

[3] *"Industry Gets Help from the Handicapped." Iron Age, April* 15, 1954, *p.* 65.

[4] *"Finding How Much Work Cardiacs Can Safely Do." Business Week, Feb.* 26, 1955, *p.* 161.

[5] *Ogg, Elizabeth. "Save Your Sight." Public Affairs Pamphlet No.* 215, *Public Affairs Committee, N. Y., Dec.* 1954, *p.* 1.

[6] *"The Handicapped—It's Good Business to Employ Them." Steel, May* 11, 1953, *p.* 86.

lion men and women in the United States who need vocational rehabilitation in order to engage in suitable employment. About one fifth of these persons, or 400,000, are so severely physically handicapped that comprehensive rehabilitation services at specialized facilities are considered necessary for their rehabilitation.

This matter should be given serious consideration. Instead of being self-supporting, happy citizens, many of these handicapped people are forced to become a tax drain and, I am sure, find the situation frustrating to say the least. Many of these people could find their way into the manpower pool. That they are capable of valuable contributions was proved during World War II, when our defense plants were manned in great part by persons who formerly might have been considered unemployable.

ABILITIES, NOT DISABILITIES, COUNT

During World War II some 5 million men were rejected for military service because they were considered physically unfit.[7] Selective Service figures also indicate that approximately 30% of all medical rejections and 30% to 40% of all discharges were on a neuropsychiatric basis.[8] The majority of those rejected for physical reasons and many of them with mild psychiatric disorders were eagerly hired in defense plants, where they helped to break all production records. Added to this group in industry are, of course, the older workers whose numbers are steadily increasing.

It is obvious, then, that industry has had a large number of the "handicapped" on its payrolls without any deleterious effect on efficiency or production. Many of these persons industry is not even aware of. In fact, the individuals themselves believe they are in good physical condition. In a study reported by Dr. Howard A. Rusk of a corporation of 2,000 executives, 10% of whom reported having major diseases or disabilities and 50% minor ones, it was found that actually 62% had major and 38% minor ones. Yet the company had one of the biggest profits in its history despite this fact.[9]

Dr. D. V. Holman likewise reported that, in examinations made by him of 700 individuals for organic and functional disease from 1947 to 1949, only 290 were seemingly normal individuals, and even these persons suffered psychoneuroses which could adversely affect employment.[10]

According to Dr. Rusk, most individuals use less than 10% of their physical capacities in average daily living, and it has been estimated that only 1% of the population are fit for all types of work.

A *Survey of Jobs for the Handicapped*, made by the Federal Government, revealed that 9,000 of the 25,339 different types of jobs in the United States can be satisfactorily filled by the variously handicapped.

Industrially, at least, we must view the handicapped from the standpoint that if an individual having some physical or mental impairment can be fitted to a job where he can perform equally as well as his unimpaired fellow worker, then that individual theoretically is not handicapped so far as that particular job is concerned. In fact, the experience of many companies which have made it a practice to hire the handicapped where they were capable of handling jobs is that the handicapped are particularly dependable, efficient, loyal employees. Such workers are in many instances superior to others in their job performance, since they often have over-compensated skills which have been developed because of the disability. Their safety records, attendance, and reliability are likewise equal or superior to those of their unhandicapped co-workers. And because of their appreciation, loyalty and attitude respecting their jobs, they greatly reduce the problem of labor turnover. Given a chance, they will put forth their best to prove their worth and to hold on to the security that goes with steady employment.

Many large companies which employ handicapped workers can vouch for their merits. Ford Motor Company's Rouge Plant in Dearborn, Michigan, has at work 4,100 handicapped. One out of every 15 employees is suffering from a handicap. Careful placement techniques in the Ford plant make it possible to find the right job for an employee, commensurate with his abilities, physical condition and requirements. There are 40 categories of handicaps on the company list, including neurosis. Employees so classified are given jobs which cause no mental or emotional strain and which are closely supervised where necessary.[11]

General Motors Corporation is another industrial organization which takes job placement seriously. Dr. Max R. Burnell, medical director of the corporation, inists that it is a man's abilities and not his disabilities which count, and each applicant is judged on that basis.

Other companies with a realistic philosophy toward employing the handicapped are the Allis-Chalmers Manufacturing Company, Aluminum Company of America, Bulova Watch company, Caterpillar Tractor Company, Firestone Rubber Company, General Electric Company, International Business Machines Corporation, and Procter & Gamble Company.

It is hoped that as more and more industries follow suit, better statistics can be had of the actual number of handicapped persons employed by industry and the nature of their handicaps. Companies maintaining good medical programs and keeping records of the health status and productivity of their employees can also add immeasurably to an accurate picture of the extent of the problem in industry.

PREVENTIVE MEDICINE ALLEVIATES THE PROBLEM

The situation is more difficult with those persons whose handicaps are not easy to spot. Physical and mental limitations often go unrecognized and consequently nothing is done to guard against aggravation of the physical condition or, in the case of an emotional maladjustment, to keep it from deteriorating into a disease. Healthful, pleasant working environment and careful job placement both are essential to the physical and mental well-being of the worker.

The important thing to remember is that a man is not handicapped occupationally unless he is improperly placed on a job. To avoid unsuitable placement, management must have an awareness of applicants' physical incapacities and must consider them in relation to requirements of the various jobs when employment is contemplated. The problem is solvable to a great extent when the company has a sound medical program. The keynote of such a program is

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[7] *Rusk, Howard A. and Taylor, Eugene J. "Untapped Manpower." Employment Security Review, Sept.* 1949, *p.* 5.

[8] *Novick, Rudolph G. "Mental Hygiene and Industrial Health." National Safety News, Dec.* 1947, *p.* 28.

[9] *Rusk, Howard A., and Taylor, Eugene J. "Untapped Manpower." Employment Security Review, Sept.* 1949, *p.* 5.

[10] *Holman, D. V. "Psychiatric Problems in Industry." Read at the Medical Research & Clinical Conferences of the Standard Oil Co. (N. J.) held in New York April* 14, 1949.

[11] *"Placing the Handicapped." Modern Industry, Nov.* 1953, *p.* 43.

preventive medicine, which goes far beyond the mere treatment of injuries. The age-old maxim, "An ounce of prevention is worth a pound of cure," is particularly apt with regard to health.

An essential aspect of a good health maintenance program is the preplacement examination. Not only does it determine whether the applicant's physical status is compatible with the job for which he is being considered, but it uncovers physical defects which would not affect ability to perform a job at the time although they might be detrimental later and should be corrected for the applicant's own benefit. The preplacement examination serves the further purpose of establishing the degree of injury or disease present at the time of employment, since 42 states have "second injury" laws or funds which make the employer liable only for the newly acquired damage and not for the total disability compensation.

Periodic examinations further protect the employee's health. As abnormalities develop as the result of aging, illness, or injury since the date of employment, they must be considered in the light of the requirements of the job the man is doing. Where necessary, changes must be made for the employee's own good and for the safety of his co-workers.

Scrutiny of accident records and compensation insurance claims reveal that much higher insurance rates and time-loss ratios prevail when the employer does not utilize the preplacement examination. By failing to do so, he subjects physically impaired and unstable persons to further impairment by poor selection and exposure to hazards of jobs for which they had neither the emotional aptitude nor the physiologic capacity.[12]

To determine proper utilization of the worker's best physical characteristics, the industrial physician must not only be a good clinician, he must have a thorough knowledge of job requirements, of toxicology and of environmental hazards, and must be able to recognize disease as being occupationally or non-occupationally caused, and know the treatment.

Keeping in mind all these measures for coping with the problem of the physically handicapped, one can see that the statistical picture presented earlier is not as grim as it may have seemed.

[12] *Luongo, E. Parker. "Employment of Persons with Certain Physical and Neuropsychiatric Impairments." Occupational Medicine, 3, Jan.* 1947.

THE MENTALLY HANDICAPPED WORKER

Solution to the problem of the mentally handicapped worker is not so clear-cut. Certainly psychiatric disorders are more difficult to diagnose, particularly minor maladjustments. The mental health problem is considered to be one of the most serious health problems in America today. According to a recent report by the Psychological Service of Pittsburgh,[13] patients in mental hospitals constitute more than 50% of the patients in all hospitals for all diseases. Surveys have indicated that at any one time approximately 6% of the population has a serious mental disorder. Each year mental illness is responsible for the loss of an estimated 1 million man years of work and is the leading cause of illness and disability. One typical study disclosed that approximately 25% of all sickness absence was due to neurosis and that approximately 10% of the workers examined were considered to have a "disabling neurosis."

In a study made in 13 medium and light engineering factories in London,[14] psychological tests, medical examinations and psychiatric evaluation given to more than 3,000 male and female employees showed that 10% of the workers had suffered from definite and disabling neurotic illnesses during the course of 6 months, resulting in the equivalent of an annual absence of 3 working days for every man, and 6 working days for every woman. A further 20% had suffered from minor forms of neurosis. Neurotic illness caused between a quarter and a third of all absence from work owing to illness. It was also concluded that neurosis was as frequent among those on the less skilled jobs as it was for the skilled; and that it was as frequent among those usually receiving the highest range of earnings as among those usually earning less.

Neurotic ailments are brought about by a combination of forces bearing on an individual at any one time. Heredity, childhood experiences, type of schooling, social and cultural background, all play a part in the sum total of an individual's experiences and determine just how that individual will adapt to the stress of everyday living. While industry cannot be blamed if a worker's tolerance to emotional conflicts is low, nevertheless an individual's occupation is a major part of his environment. Difficulty or confusion in the minds of industrial workers may be triggered by such things as new responsibility on the job, factory fatigue, insecurity, poor job placement, poor supervision, adverse working conditions. When these are coupled with personal anxieties, troubled home atmosphere and other off-the-job situations, disturbances in the nervous system result which have no obvious organic pathology. It is significant that a small percentage of the entire working force contributes the major portion of sick absenteeism. According to William Fulton of General Motors, 80% of all absenteeism comes from 15% of the workers. Drs. Hinkle, Jr. and Plummer of Cornell University and the New York Telephone Company have reported that persons who find it difficult to adapt themselves to the stress of every-day living are, as a group, the ones responsible for the major portion of illness and absenteeism in industry; 25% of the women contributed 75% of the sickness absence each year.[15]

Maladjustments are behind actions of industry's discontented employees, its undependable workers, those who just can't seem to get along with their supervisors or co-workers. Statistics quoted by Dr. William C. Menninger from surveys made show that from 60% to 80% of all dismissals in industry are due to social incompetence and only about from 20% to 40% to technical incompetence.[16]

It has been estimated that 20% of all employees in peacetime are borderline emotional cases, unable to bear efficiently the stresses of industrial work.[17] It is important, then, that industry be able to distinguish which employees are potential emotional cases and exercise extreme care in matching individuals to proper jobs so that undue stress is not brought to bear on them. Working environment should be as comfortable and safe as possible, and this requirement applies, of course, to all workers. There will be the man who can't work in a crowded area or is unusually disturbed by noise; another who is tense and rest-

[13] *Psychological Service of Pittsburgh. "Report No. 7—Mental Health in Industry." April* 1955, *pp.* 1, 2.

[14] *Fraser, Russell. "The Incidence of Neurosis among Factory Workers." London: H. M. Stationery Office, Industrial Health Research Board,* 1947. *(Rep. No.* 90.)

[15] *"Workers Who Find Life's Battle Hardest Most Frequently Absent, Study Reveals." Personnel, Sept.* 1952, *p.* 157.

[16] *Menninger, William C. "Men, Machines, and Mental Health." American Association of Industrial Nurses Journal, July* 1955, *p.* 15.

[17] *Whitney, L. Holland. "Emotional First Aid Stations in Industry—On the Job." Industrial Medicine, May* 1946, *p.* 337.

less and cannot work at a tedious, repetitious operation which restricts him to a minimum of motion and variation. Industry must be concerned about individuals with psychoneuroses and maladjustment problems.

The position a man holds may be a source of disturbance to him, an example being that he may feel the work is "beneath" him compared to the standards of the social group to which he belongs. However, if he does not have the ability to handle a job to which he aspires, more harm could be done by placing him in it, because it would be a constant source of anxiety to him, thus creating tension and disturbances. If the man is not willing and able to assume increased responsibility, he may well develop what has been called promotion depression. This fact places a grave responsibility on company personnel departments in hiring employees and finding the proper places for them.

The industrial physician can direct determination of the physical capacities of an applicant. And many industrial physicians are sufficiently comprehensive of psychiatric principles that they can proceed further in evaluating aberrance for particular jobs. Many companies use the expert guidance of psychiatrists in laying down procedures to follow in personnel department activities. Some companies have full or part-time psychologists working to match men to jobs.

Studies made a quarter-century ago at the General Electric Company and Scoville Manufacturing Company brought out that tests of definite nature may be so combined as to facilitate the appraisal of an applicant's qualities for certain types of work. About the same time, the Metropolitan Life Insurance Company and R. H. Macy and Company demonstrated psychiatric and medico-psychologic possibilities in helping to choose workers and to guide them during their employment period.[18]

MAN-MACHINE-ENVIRONMENT RELATIONSHIP

Proper job placement can be accomplished without creating or revising jobs to conform to the capabilities of the worker. Changes in production methods, the most striking of which has been automation and the resulting lessening of physical stress, call for much needed revisions in the physical standards required by personnel management for various jobs. Careful study of the man-job relationship would, in most cases, indicate that some handicapped people are entirely capable of handling them.

The foregoing observations do not mean that attention should not be given to the design and development of machines to make the most efficient and beneficial use of human capacities and skills. The field of "human engineering", as it is called, is rapidly gaining the attention of industrial engineers. The science of ergonomics takes into consideration the work facilities, the working environment, and the human aspects as well. Ergonomics has been defined as the basic area of applied science which is concerned with the study of human behavior in response to external stress, with particular reference to the stress-strain problems of man at work.[19] After all, people are much more important than things.

An individual is occupationally handicapped only insofar as he is unable to perform the task at hand. And if that job requires him to sit at a table and work with his hands, it certainly is not necessary that he be able to walk to do the job well. In fact, if the man is a cripple or an amputee he would undoubtedly be much happier doing such work than a worker who has the physical ability to move about freely and who might become restless and dissatisfied if forced to restrict his movement.

Mental health, like physical health, cannot be evaluated apart from the actual situation of the worker. Physical, mental, and emotional factors combine to create psychosomatic conditions. It has been stated that 50% of the visits we make to a physician, complaining about our hearts, heads or our stomachs, are fundamentally emotional in origin.[20] Therefore, when diagnosing physical ailments, doctors must not overlook the contributing mental and emotional factors. By the same token, when studying supposedly neurotic cases, we must not assume that every ache and pain complained of is imagined by the patient. There is often a very real physical basis for the symptoms, or at least a cause and effect relationship.

ALCOHOLISM

Another form of handicap which may be a manifestation of mental illness or emotional maladjustment is alcoholism. Certainly, within recent years it has come to be recognized as an illness which often arises out of an attempt to create an artificial social adjustment. The estimated figures for the number of alcoholics in this country, based upon medical studies and various types of vital statistics, lie between 2 and 4 million. It has been estimated that 2 out of every 10 problem drinkers are either mentally ill or in the "skid row" class, and hence are not in the industrial picture. Conservative estimates place the number of problem drinkers in industry 2.6% for men and 0.6% for women.[21]

CONCLUSION

When all borderline cases of physical and mental ailments are taken into consideration, the statistical picture of the number of handicapped employed by industry is blown up to much larger proportions. Just how many millions of workers are involved cannot be determined until a somewhat common concept of the term "handicapped" is held by industry as a whole and well-planned and well-conducted studies are made and accurate records kept of the findings. There is no uniformity of thinking at present, as was pointed out by Dr. O. A. Sander at the 1952 Spring meeting of the President's Committee on Employment of the Physically Handicapped. Standards vary widely from state to state, from industry to industry, and from plant to plant. Even within a company the policy from plant to plant can be vastly different. In one large industry having some 25 plants in 16 states, rejection rates of new employees in the various plants ranged from a low of ½ of 1% to a high of 20%. This finding reflects a lack of uniformity in company medical policy and a lack of medical supervision from the top.

In determining who are the disabled, industry must look beyond those individuals whose bodies have been maimed by injury or ravaged by disease. The entire fields of preventive medicine, human relations, industrial hygiene and engineering are involved. A proper understanding of man in relation to his working environment can alleviate greatly the problems posed by these borderline, potentially handicapped people. ■

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[20] *Menninger, William C.* "Men, Machines, and Mental Health." *American Association of Industrial Nurses Journal, July* 1955, *p.* 15.

[21] *Whitney, Elizabeth D. "Socio-Economic Aspects of Alcoholism." Transactions of the 18th Annual Meeting of Industrial Hygiene Foundation, November* 18-19, 1953. *Transactions Bulletin No.* 26, *p.* 34.

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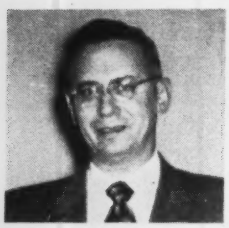

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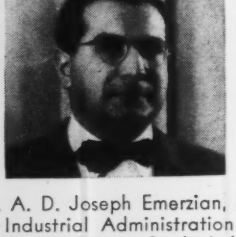

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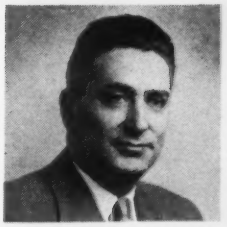
Professor Richardson graduated from the U. S. Naval Academy in 1941 with a B.S. E.E., and in 1948 he received an M.S.I.E. from Purdue University. He was Assistant Professor of Industrial Engineering at Purdue from 1949-52, when he went to Lehigh University as Associate Professor of Industrial Engineering. He has been Consultant to such firms as Union Carbide and Carbon, Haynes Stellite, Bethlehem Steel, du Pont, C. H. Masland and Sons, and others. He is co-author of the book, **Work Sampling**, to be published by McGraw-Hill this year.



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neering Conference planning. It is not by chance that each year's conference committee accepts the challenge of planning an even more successful conference. What better motivation could there be for committee *esprit de corps?* The success of any conference is determined to a very large degree by the planning experience of the committee members.

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V. Donald Schoeller
S.A.M General Chairman

Effective Staff Meetings

by Max D. Richards

Associate Professor of Management
The Pennsylvania State University

LEADERS say they hold staff meetings because "the boys want them" and because group techniques appear to be the right thing to do. His subordinates think that staff meetings are held because "the boss thinks they are a good idea."

Careful observations of staff meetings show that there is a great deal of disillusionment stemming from staff meetings on the part of both leaders and subordinates. This paper is presented to show the results of these observations in the hope that managers may recognize some of their problems in the use of staff meetings. No less important is the need for each manager to research his staff meeting practices, to re-evaluate the purposes he is trying to achieve and the methods he is utilizing. In this way, he can insure a measure of effectiveness of this important organizational device.

COMPOSITION OF STAFF MEETINGS

The term "staff meeting" has many connotations, but the type of meeting we are examining here is one which the manager and his subordinates held for discussing the operation of their part of the organization.

The most frequent memberships of staff meetings consist of:

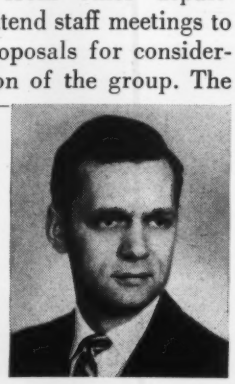
1. All of the immediate subordinates of the manager.
2. All of the immediate line subordinates of the manager.
3. All of the immediate staff subordinates of the manager.
4. Subordinates and their "second in command."
5. Subordinates and all their subordinates.
6. Combinations of the above arrangements.

Managers who separate their line and staff groups into separate meetings feel that the staff subordinates should not participate in the decision-making that may go on in such meetings. Staff subordinates may be called in, however, to explain or present proposals for consideration of line managers. On the other hand, some other managers feel that a meeting with both line and staff groups helps to generate a degree of coordination and assists in creating a better-working team arrangement between these often conflicting groups.

Representatives from other departments sometimes attend staff meetings to present data or proposals for consideration and discussion of the group. The real work of the staff meeting is rarely done at these times, however. Few decisions are made with an outside representative present. Both the leader and his subordinates feel that the representative is an outsider with no responsibility over the operation of the department. In meetings in which observations have been made, no outside representatives attend or are invited to attend *all* meetings of a staff. In fact, where frequent outside representation is present, there is a tendency for important decisions to be made individually rather than through the group process. In most instances, it appears wise to limit outside representation in staff meetings.

When the leader, his subordinates, and their second-in-command attend the staff meeting, the size of the group tends to become unwieldy. If the span of control of the leader is six or less, unwieldiness is not so important a problem. To offset unwieldiness, the attendance of the second-in-command has the advantage of keeping him in a better position to carry on in the absence of his superior, thus providing stability to the group and to the organization as a whole. There is a tendency in some meetings for the second-in-command to become the primary representative for his part of the organization while his superior absents himself for other business.

The attendance of subordinates and their subordinates tends to make most staff meetings too unwieldy unless the span of control for all the managers is unusually small. In addition, the operations of the lower levels of the organization are too specific and perhaps too



PROFESSOR RICHARDS headed the Department of Management at the University of Wichita before joining Pennsylvania State University (1954-56). From 1949-54 he was Instructor in Management at the University of Illinois. Before the start of his teaching career he worked as a Junior Industrial Engineer for the U. S. Steel Corporation and as Consultant to Boeing Aircraft Company. He is the co-author of "Readings in Management" (with Wm. A. Nielander), and a member of the S.A.M. Central Pennsylvania Chapter.

technical for general interest in the group.

PURPOSES SERVED BY STAFF MEETINGS

In the study and observation of staff meetings, special attention was given to the examination of how well the purposes for which the staff meetings are held were met.

Coordination. A frequently mentioned purpose of the staff meeting is to achieve coordination of the various elements of the units of organization under the command of the leader. Through the presentation of actions, plans, and problems in one area that affect or are affected by other areas, modification appropriate to achieve coordination can be made.

Some managers contend that coordination is really not achieved in staff meetings to any important degree. For major items that require coordination, most subordinate managers express a reluctance to decide how this coordination will be achieved without more study of the problem than can be done in a staff meeting. Consequently, most coordination is achieved outside of the staff meeting. The staff meeting may provide a vehicle for reporting the results of this coordination to other members of the staff. These other members will not be affected to any important degree, however, or else they would have been included in the study, analysis and coordination of the problem external to the staff meeting.

A STAFF meeting may show the *need* for coordination by bringing to light action or plans in one area that will have an impact on the operation of another area. In addition, preliminary decision as to how this coordination is to be achieved is often decided during the meeting. The coordination itself, however, is more often than not accomplished outside of the staff meeting. It would appear unwise, therefore, to attempt to achieve agreement on major items requiring coordination in a full staff meeting.

Communication. A purpose of the staff meeting that is closely related to coordination is communication among the members of the leader's staff. The leader passes along information concerning plans and actions of higher managers together with the leader's interpretation of them. Some managers take the occasion of the staff meeting to give directives to the staff, to explain and interpret policy, thus accomplishing a downward communication.

Other managers expect their subordinates to keep them informed through the staff meetings of the pulse and sentiment of the activity down the line. In that the leader can check these reports against one another, the staff meeting provides a unique opportunity for cross-checking upwards communication.

It is certain that some staff meetings do not serve as a major communication media, however. One manager contended that he rarely received anything in the staff meeting that he did not already know. He did believe, however, that other staff members found the meetings informative. In subsequent discussions with these other members, they reported that they, too, were receiving nothing new in the way of information.

A further criticism of staff meetings as communication media is the proclivity of some managers to use it as an opportunity to expound the virtues of their operation. Through the recital of the detail of their operation, they apparently feel that an impression on the leader and the group through sheer numbers of accomplishments will be made. Usually, such a recitation is merely boring.

In discussion with managers who were subordinates in staff meetings, the following communication preferences were noted:

1. They wanted the *opportunity* to participate even though they may not have anything to contribute during a particular meeting. They wanted the right to say something even though they might not exercise that right.

2. They prefer to have some form of communication from the leader at *each* meeting. They want it "straight from the horse's mouth." This may reflect a desire to be more fully acquainted with plans and operations at higher levels in the organization.

3. They prefer that other associates in staff meetings be restrictive in the information which is contributed at the meetings so that too much detail is not presented.

4. They prefer that the meeting not be nominated by the superior. They wanted to feel *free* to participate even when they knew that they had the *right* to participate.

5. They prefer that the leader prevent associates from dominating the meeting or taking up too much time. They feel this restriction is the leader's job.

Prestige and Status. Attendance at the staff meetings in some organizations is a mark of distinction. It indicates to other members in the organization that the attendee has a job important enough to require coordination and direct control by the boss. This purpose is defeated if everyone knows that the meeting is merely used as a device or an opportunity for the boss to correct his subordinates. Even in these instances, however, the managers who were on the receiving end felt that they would rather be in on the meetings than to be left without the dubious status. In cases where managers felt that they personally did not get much out of the meetings, suggestions (1) that they attend only when requested, or (2) only when something was to be discussed which affected them were turned down because they felt that they would be losing face in the organization if they did not attend.

HENCE, it appears that the staff meeting provides a strong prestige-building device in organization. For a manager who has not held staff meetings heretofore they may provide a method for building a degree of recognition for his subordinates. Although few leaders consciously would initiate staff meetings for this purpose, its importance to his subordinate managers should not be underestimated.

Decision-Making and Participation. Recent literature has given widespread support to the proposition that many benefits accrue to the manager and his organization if he allows his subordinates to participate in the making of decisions as a group. The terminology of consultative management, democratic direction, and participative management has been applied to these group techniques. In the use of these techniques with their staffs, however, a great deal of confusion is evident. Managers point to what they feel are some unresolved issues:

1. Participation is limited on the part of some subordinates to the guessing game of "what's on the old man's mind today?" To what extent do word phrasing, voice inflections, facial expressions and other mannerisms communicate the decision to the members of the staff? Is the leader to change from a dynamic interacting "example" to an impassive, stony, seemingly disinterested "spectator" of his underlings playing at the game of decision? Some leaders (and members) believe this change would be unfair to the whole organization.

2. Since certain members of the staff tend to dominate the discussion and the

As I see the progressive manager, he is not very much interested in costs as such. He is bent on reducing them no matter what they are. In this effort, he is constantly making changes that he thinks will improve costs.

Phil Carroll
COST CONTROL THROUGH ELECTRONIC DATA PROCESSING

decision that the group makes, is it not just as valuable to delegate this specific decision to those people? For those who did not participate or dominate, specific delegation of other duties could be used to build their skills in handling problems. What is the advantage of group decision to these people whose participation is limited?

3. There is a question in the minds of some managers as to how far participation should go. Should the leader make the decision after consultation with the group? Or should the decision of the group be utilized? Managers point out that they cannot reject an honest group recommendation without taking a chance in disrupting other relations.

4. Although journal articles and development courses provide an intellectual appreciation of the *reasons* for the use of group techniques and the *advantages* accruing from their use, there is a marked *lack of skill* preparation in the use of the technique. It is reasonable, therefore, for the manager to feel uneasy in an unfamiliar role of leading his staff in participative techniques. Similarly, most "courses" in group techniques do not remove all the uneasiness expressed by managers in the other unresolved issues noted above.

THE PURPOSE of allowing participation in decision-making through the staff, then, is probably unrealized to a great extent. A development of further training techniques to ease the manager over the point of intellectual appreciation to enthusiastic and successful use of participative management techniques is needed.

Control. In some staff meetings, the manager takes the opportunity to review the performance of each of the submanagers in the group and to point out ways that improvement could be made. Implicit in this evaluation is "public criticism" of the operations in the department of his subordinates. In order to avoid this limitation on the control of activities, some managers make it a point to review the performance of each manager with him on an individual basis before the staff meeting and only bring up in the staff meeting those items that are going to require group action.

An all too common practice of some leaders is to evaluate the performance of his subordinates in a staff meeting when the reports on which the evaluation are based are distributed for the first time at the staff meeting. Subordinate managers dislike this practice intensely since they have no formal, prior notification of what they can expect. Some subordinate managers feel they are forced to keep informal (and duplicate) records over the activities upon which they may be called to task. One manager who was subject to this practice from his superior said that he didn't keep any records, but instead, he spent his time thinking up excuses to explain deviations from acceptable performance on the assumption that his superior's analysis of the figures in the staff meeting would require explanations.

Developmental-Educational Purpose. Many managers feel that the primary function their staff meetings provide is the development of subordinate managers. The subordinate is exposed with the problems of higher echelons and to the extent he absorbs anything from this exposure, his outlook is broadened. The viewpoint of other managers on his same level is presented also. These views tend to broaden. The increased awareness of operations tends to make the contribution of the subordinate more significant in relation to the over-all objectives of the superior and of the company as a whole.

Some managers utilize the staff meeting as a conscious educational device. One leader asked each subordinate to prepare a statement of the goals of his organization together with the contribution that he thought meeting these goals would make to the operation and objectives of the superior's organization. Subsequently, a self-evaluation of how well these goals were being met was made the subject of a subsequent series of staff meetings. Over several months, the leader was able to focus on the educational purposes of his staff meeting by (1) presenting a conscious education effort within the meetings, and (2) showing his interest in broadening his subordinates through these presentations.

CONCLUSIONS ON PURPOSES OF STAFF MEETINGS

Some of the major purposes that managers think they are accomplishing through staff meetings may not be met in practice. Observation shows that these may include coordination, communication, decision-making, and control. On the other hand, staff meetings appear to provide a measure of status and prestige to participants. In addition, the developmental possibilities of staff meetings appear to be substantial.

ADDITIONAL FEATURES OF STAFF MEETINGS

In the course of attempting to enhance the value of staff meetings, examination of additional specific features of staff meetings were made to determine how they met the needs of the staff meetings. A discussion of these features follows.

1. *Duration of Meetings.* The meetings that are preferred by most participants are those that last for less than one hour. Longer meetings tend to drag, take the individual away from his job and other meetings, and loss of attention and side play becomes more evident.

2. *Definite Adjournment Time.* Leaders and participants, alike, prefer a definite time at which the individual can plan on being out of the meeting so that he can make other appointments and plans.

3 *Regular Meeting Time.* Rather than to be on call for a staff meeting, most people prefer a regular time. One organization found that a single meeting a week was not sufficient to transact all of the business that came up on their staff meetings. A second time during the week was provisionally set with the understanding that if enough business accumulated, a meeting would be held. Although this introduced some indefiniteness into the scheduling of the staff meetings, members preferred this arrangement to being on call at any time. They were able to plan around that particular time with safety.

4. *Avoiding Unpopular Times.* One organization held staff meetings the first thing on Monday mornings. Although this arrangement is quite common, there is likely to be at least a sizeable minority who have an intense dislike for it. Shifting the meeting to Tuesday allowed these members to orient themselves for the week's work and allowed more relaxation on the weekend. An even more unpopular procedure was the use of Saturday meetings at 11:00 a.m. These usually spilled over into the lunch hour and

prevented members on many occasions to keep appointments with their families.

5. *Agenda.* The use of an agenda for staff meetings has both its adherents and its detractors. The latter feel that the use of an agenda tends to formalize the meeting to such an extent that the values of the agenda are outweighed. One of the major desires on the part of participants of staff meetings is an informal atmosphere. They feel that informality assists in getting the work of the staff meeting accomplished because individuals feel freer to join in discussion. An attitude of tenseness works against free discussion, but people who utilize an agenda do not feel that it necessarily limits discussion, but rather helps to generate it. If a member is aware of the items that are going to be discussed before he comes to the meeting, he can be in aposition to discuss it. Managers who have worked under both arrangements have a preference for an agenda.

6. *Differences in Meetings.* Significant differences exist between different meetings in terms of purposes that the leader and the group are trying to achieve. Some groups have never verbalized their goals. Some leaders have difficulty pinpointing their group objectives. Some are trying to accomplish many things, others few. Still other leaders hold staff meetings because this is the accepted organization practice. There is widespread inexactness in defining objectives.

CONCLUSIONS AND RECOMMENDATIONS

Objectives of Staff Meetings are sometimes not clarified. Objectives that the group or the leader think they are meeting frequently are not achieved in practice. Specific practices in their meetings are disliked by members of the staff meeting and, at times, by the superior himself.

A procedure for a manager to arrange his staff meetings for greater group effectiveness includes: (1) re-examine and define the purposes that he and his group think they ought to and can attain; (2) examine the specific feature of staff meetings as they are presently held to determine how they add or detract from meeting purposes; (3) consider changes and additions to practices that will assist in improving group performance; and (4) follow through and reexamine, on a periodic basis, these same elements. Duties and responsibilities of members change. Membership in the group changes. Periodic study of staff meetings yields dividends in higher organization effectiveness. ■

The Growing Challenge of Complexity

by Walker Cisler
President, The Detroit Edison Company

AMBITIOUS YOUNG MEN and women sometimes wonder whether they can ever hope to comprehend the complex problems of industry and to learn how to deal with them effectively. Although intelligent people are attracted by complex problems, there are times when the modern world seems too complicated for anyone.

Consider the situation as to factual data. We properly place great value upon education, both the formal variety and the kind that must be pursued earnestly throughout life. But today information is piling up so rapidly in so many fields that no one can any longer consider himself really well informed in more than a few fields. The pleasant sense of security that formerly descended upon educated people has vanished, perhaps forever.

Even that golden harvest of maturity—experience—is no longer quite the gleaming treasure it was once. We live in a time of accelerating technological change. New developments continually change our relationship to what has already been developed. What was "true" last year may have a significantly different aspect today. The experience of the past still has great value, but we dare not depend upon it the way men did in times when human society was relatively static.

With the development of our understanding of the many factors affecting business enterprise, we have come to realize that even routine decisions would be improved if we could somehow optimize all the variables with mathematical accuracy.

A young person approaching management responsibility may wonder whether in time he will find himself conferring with men or merely implementing the conclusion coming out of a super-computer.

Equally upsetting to the individual's equanimity may be the feeling that problems are multiplying faster than the world is solving them. Technology has brought all people and places together in a critical mass. Our modern command over vast amounts of energy gives unprecedented magnitude to the consequences of many decisions.

The intricate modern relationships between men have produced many sensitive areas in human affairs. Although we need each other as never before, we see painful evidence on all sides that men are divided in their opinions and in what they conceive to be their unalterable needs.

At one time great decisions could be made from a one-sided point of view, and the human race was somehow always able to live with the consequences. Obviously, we need something better today, but complexity and something that we often dismiss as human nature make the task of decision difficult.

Is there a solution, or at least a working philosophy that can guide us?

Throughout history men have always found the ideas and the means for solving their problems. The process in the past has often been fantastically wasteful. Our greater control over environment offers us the hope that we can solve today's problems without such waste and suffering.

If knowledge has increased so, too, has the number of trained men and women who can direct the forces at our command in appropriate directions. This gives special significance to all of our efforts to understand each other and to cooperate. In other words, technology has made men not less important but more important.

We must be careful not to become so technically competent that we lose track of why we became this way in the first place. Industry and technology have no meaning apart from people. They are not ends in themselves. The basic point of reference must always be the benefits that they confer upon all the individuals who make up the human race.

Ideas and character will always be more important than the devices that men invent. Life will always be dramatic and intuitive, ranging beyond even the most brilliant achievements of technology. This we must believe, otherwise there is no purpose in what we do.

We must assume that many of the differences of opinion that we encounter have an inner necessity and result from men experiencing the same phenomena in different ways. According to an old fable, several blind men tried to describe an elephant. Each man had a completely different idea, depending upon the part of the elephant that he happened to touch. Between them they had all the answers—but they hadn't got around yet to cooperating.

In the United States we have made considerable progress in the cooperative arts of liberty, integrity and enterprise. At varying distances, the nations of the world observe what we have accomplished and form opinions of us. All of these opinions are important. Some are wrong. Some of them can help us to understand ourselves a little better.

We know that the world respects the American standard of living. Nevertheless, in my travels I have discovered that the young people of many nations yearn even more for what we may call the American standard of working, which so many of us take for granted.

In this they are not disparaging the way we live and spend our money. They are simply putting first things first, realizing that there is much more satisfaction in achieving something than in consuming something.

The American standard of working puts vast and admittedly complex facilities at our disposal, continually opening up an increasing number of industries, jobs and professions. The wealth and the tools are here for us to work with in an exciting world of technological change directed toward human need.

It is hard to comprehend how many ambitious young people there are in other parts of the world who wish they had the same opportunities, the same outpouring of data, the same pace of progress, all the instruments, machines and computers—and the inherent complexities—upon which to exercise their talents.

These are ours and we are learning how to use them better and how to share more of them with other nations. I see many sobering demands upon our ability, a growing responsibility for the sound management of what we have to work with, and a very bright hope for the spirit of men of goodwill. ■

Management Skills For Scientists In Supervision

by James William Caldwell

Associate Professor of
Industrial Engineering
and
A Member of the
Management Training Staff
The Pennsylvania State University
University Park, Pennsylvania

The challenge of Management development is of primary concern to research and development organizations. The size and complexity of scientific organizations have focused the attention of Management on the problems of supervision. This article discusses a one-week seminar on the subject "R & D Management Development" sponsored by the Summer Engineering Program at The Pennsylvania State University. It reviews the program and points out some of the basic problems and philosophy in training scientific supervision.

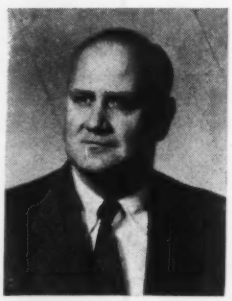
THERE IS a growing need today for engineers and scientists, thrust by their technical competence into the throes of administration and supervsion, to develop skills in administrative techniques and human relations. Frequently, men with good scientific training and excellent background of experience in their chosen fields become frustrated, ineffective executives when their primary responsibilities change from dealing with "things" to dealing with "people."

Two years ago at Penn State we inaugurated a unique and interesting one-week seminar with a general theme, "Management Skills for Scientists in Supervision," and "R & D Management Development Seminar" as its title. The program was designed to meet the needs of these scientists and engineers. Its objective was simply stated "to provide training that will help the research supervisor plan, organize and control his division, department, project or section so that he will become a more effective executive."

It was emphasized that the program would be of primary interest to engineers, physicists, chemists, and others who are now, or may be, in the capacity of project engineer, supervisor or leader in a research or industrial organization engaged in government and/or private work. It has been our objective to develop this program around the needs of intermediate or project level supervision, rather than the top administrative management level such as the research director, or vice-president in charge of research and development.

The College of Engineering and Architecture at Penn State each year sponsors a number of engineering seminars and conferences. When a new seminar program is introduced it presents a number of basic problems and questions which only experience can really answer. (Our planning committee from the College of Engineering and Architecture wrestled with what the nature of the program should be.) Should we "pitch" the program along the line of the basic principles of supervision and administrative techniques, or should we include some of the ramifications of mathematical and statistical techniques in management decision making, operations research, or other recent managerial innovations?

We decided the program should be



PROFESSOR CALDWELL has been active for over 12 years with the Management Training Staff at Pennsylvania State University, teaching management and accounting courses, and serving as lecturer, conference leader and on plannng committees for management seminars and workshops. In 1954-55 he was a Fulbright lecturer at the Technical University of Denmark, in Copenhagen, and conducted a management seminar with business executives of that country. He also lectured in various cities in Germany and Sweden while in Europe. In 1957 he conducted a series of lectures on Industrial Management at the University of Puerto Rico. He has also conducted management training programs in various industries throughout Pennsylvania. He had over 15 years experience in business before joining Penn State. He is a member of the S.A.M. Central Pennsylvania Chapter.

along basic line of supervision and administrative skill. This decision in turn opened up other challenging questions and problems. Do the principles of supervision and administrative skill differ in research organizations from other types of activity? Should an atmosphere of formality be maintained in the seminar, or should the effort be directed at creating an informality and feeling of comradeship within the group? What subject matter areas are of particular significance to scientific supervisors? What should be the pattern of the program? Without having too much experience to draw on, we have tried to find the answer to these and similar questions.

PROGRAM AND PARTICIPANTS

The general pattern for each day's meetings during the week consisted of lectures in the morning and afternoon, followed by short question and answer periods. Enrollees were then assigned to a number of workshops for further development of the topic of the day. As a final activity, the group reconvened for a general "action" session which provided an opportunity for special group activities. Evenings were occupied with a "get acquainted" dinner, picnic, and banquet.

The choice of subject matter for a management development program such as this requires careful planning because of the wide scope of potential topics for discussion. It is essential that a balance of thinking be maintained between the control techniques in management and the human relations factors. Since it was the purpose of the seminar to develop a philosophy and understanding of these inter-relationships, there was no attempt to introduce into the discussion the specialized techniques of statistical and mathematical controls in management decision making. Rather, the program for the week was centered around these lecture topics:

Future Trends in R & D Management
Building an Effective Organization at the Technical Level
The Management Role of the Research Supervisor
Leadership Patterns for Technical and Scientific Supervision
Motivating Scientific Personnel
The Process of Delegation
Directing and Controlling the Scientific Group
Counseling the Supervisor-Scientist
Evaluating Staff and Supervisory Potential
Pass the Word for Executive Action

Foundations of a Management Development Program

It is axiomatic that a seminar of this nature is only as good as the people you have working on it. There are at least three essential services which the staff must provide the seminar:

(a) Lecturers
(b) Conference Leaders
(c) Activity Coordinators

Lecturers are like the backfield men on a football team. They are seen and receive the plaudits of the crowd. But the "linemen" are the conference leaders and staff coordinators who must quietly, but effectively, make the plays possible. The skill of conference leadership in workshops contributes greatly to the success of the program.

It is the University's responsibility to provide this type of seminar service to the public at a reasonable cost, and it is only through the cooperation of industry and the University staff that this may be accomplished. We have been fortunate in having represented on our own seminar staff scientists in government and industrial research, university and industrial management training specialists, personnel administrators, management consultants, and professors from Penn State and other institutions of higher learning. Industry and some governmental agencies provide, without charge, the services of staff members from their organizations, while it is customary to pay expenses and a nominal honorarium to visiting professors. Most of the Penn State staff members work on the seminar as a part of their regularly assigned duties.

Enrollees in the two seminars conducted thus far have been, as you would expect, intelligent and cooperative, with a fine sense of group rapport. There have been in attendance each year approximately 60 persons, which we consider to be the optimum size, and workshop groups have been limited to 12 to 14 each. Represented in the groups is a good cross-section of the various types of research and development organization in the country. It is interesting to note that approximately half the persons in the groups have been from the Army, Navy and Air Force, the other half from private industrial research organizations.

SOME PHILOSOPHY AND CONCEPTS OF R & D MANAGEMENT

An objective of this article is to summarize some of the significant viewpoints expressed by our various speakers and to sense some of the philosophy and basic concepts of R & D Management. The necessity for having a sound philosophy of management was well expressed by Frank A. DeBernardis, Esso Training Center, Esso Standard Oil Company, New York, when he said, "Every manager must develop, understand, and—most important—apply a philosophy or belief that will guide his actions in the discharge of his job."

I am convinced that the philosophy and concepts of research management are very much like, but also of necessity, somewhat different from other industrial or governmental activities.

Merritt A. Williamson, Dean of the College of Engineering and Architecture, Penn State, expressed some of these similarities and differences in the keynote address when he discussed future trends in R & D Management. He pointed out that, "We are dealing with a class of people who are better educated than average, more intelligent than average, and are independent, critical and somewhat resentful of authority and close operational control. They are quick to criticize but resentful of criticism. Their basic orientation or "set" is to "things" rather than "persons."

INHERENT difficulties exist in research activities that provide a challenge in the motivation of the scientific worker. He tends to attach considerable importance to privileges such as attendance at technical society meetings, freedom to publish papers, freedom of working hours, etc. His job limits are generally less precise and he is expected to generate more than an average amount of initiative in carrying out his responsibilities.

Another problem is the difficulty of formulating aims and objectives in terms tangible enough for the person to grasp. There is generally a long interval between the setting up of the goal and the achievement of results, which tends to throttle incentive. As a result, most managers are unable to measure output —hence the efficiency of the organization —and have neither the ability nor inclination to develop reliable procedures of evaluation.

While these fundamental motivational problems are not necessarily peculiar to research organizations, it is apparent that a great deal of education and training will be required to orient scientifically trained personnel into the profession of R & D Management. It is rapidly becoming recognized as one of the most

important professions and provides a real challenge for management development. The project engineer, department head, or executive at any level in the research organization will have to learn how to delegate responsibility and authority more effectively. He must allow greater freedom for the junior man to make mistakes. He must be less authoritative and dictatorial. As a manager he will have a greater burden in nontechnical areas. He will have to consider himself more as a coordinator rather than a prime doer. The job skill which he must develop is persuasion, and he must be person-oriented rather than thing-oriented.

Each of the subject matter areas discussed during the seminar made a definite and tangible contribution to the individual's knowledge of the problems of research supervision. But even more important was the feeling that these men were learning how they could better deal with these problems back home on the job. I should like to summarize for you some of the principles and basic concepts developed from some of these topics. For the sake of brevity, I will pinpoint several that seemed to be extremely challenging.

1. EFFECTIVE ORGANIZATION PATTERNS

The very nature of research and development as a business activity has changed in the past ten to twenty years from comparatively small units in which the research scientist operated as an individual with little supervision exercised. Today the research organization has become relatively large and complex, employing many people and requiring a high degree of skill in cooperation and teamwork. The concept of the organizational structure of a modern research group is essential to understanding the kind of educational program needed for R & D Management Development. Dr. Gilford G. Quarles, Chief Scientist, U. S. Army Ballistic Missiles Agency, Huntsville, Alabama, in discussing the building of an effective organization at the technical level, pointed out that, "To be effective, the research organization must be built around the creative mind of the research scientist. The entire organization must be aimed at providing the most effective utilization of the best mental and physical environment for the solution of problems and the effective utilization of the research scientist's problem solving ability."

The most difficult hurdle, as he points out further, is to convince the individual research worker that organization is essential. He must learn that research in modern science and engineering is best accomplished as a group or team effort. However, we must also bear in mind that the organization and the research administration are merely a service function to the research scientist.

DR. QUARLES makes another interesting point when he says, "It should never be expected that any research organization is going to operate as smoothly as a well-oiled machine. The inherent nature of the research scientist, the fact that the solution of scientific problems always leads to the creation of other problems, and the fact that the best organization is one in which the personnel not only follow assignments but do more than is expected of them, means that a research organization can never be expected to run smoothly. It is this fact that makes research supervision and management a difficult but fascinating and challenging task."

The organization structure for research and development laboratories shows several basic patterns. In the subject type of organization, the segments are divided along the lines of a scientific discipline such as chemistry, physics, metallurgy, etc. and is ideal for basic research. This presents no serious complexity of management control. But applied research and development laboratories generally require some form of functional or project team type of structure that may cover the entire gamut of technical disciplines. This leads to what Dean Williamson describes as a "matrix" type of organization in which "a man is assigned for administrative purposes to a division in which will be found all men of similar interest and training. He reports to the head of this division for technical guidance. This man rates him, promotes him, champions him, and assigns him a work load. At the same time persons may be designated as project engineers who will have the responsibility for the successful completion of the projects. If they need a chemist for their project, they ask the head of the chemistry department what he can do for them. The role of the chemist in the project is discussed and a man is assigned who works under the leadership and general coordination of the project leader but has his work place and his 'home' with his division." The ugly spectre of the two-headed monster of dual subordination (e.g. "A man cannot serve two masters") inevitably appears in this situation. And if we further consider that the normal staff and service function, such as personnel, procurement, drafting, report writing, etc., will be necessary to assist the project or team operation, it becomes quite apparent that a high degree of management skill will be required to effect a well coordinated team action. This is the real challenge in R & D Management Development.

2. LEADERSHIP

It is a strange phenomena that engineers and scientists—who through their training and experience, are strongly oriented in technical matters but have had little, if any, training in the inexact "art" of management—are finding themselves in responsible management positions. The leadership requirements of the scientist in supervision, as we have seen, are very exacting. Much of the thought and effort throughout the seminar was devoted to this problem. N. Richard Diller, Associate Professor of Psychology and Member of the Management Training Staff at Penn State, in discussing leadership patterns for technical and scientific supervision, said that in this group "there is much more leadership potential in all of us than we are willing to realize; we have some very good leadership material." But he further pointed out that "if we have a man who has technical and scientific training, and want to make him into a manager, we must recognize this as a separate and distinct area of skills. We must provide for that training the education which will utilize these aptitudes in developing skill in management."

PSYCHOLOGISTS tell us the idea of transfer of learning is outmoded. Because he is an excellent scientist and an intelligent man is no assurance that he will be an effective executive. We must, therefore, find the means of conditioning the individual to these kinds of responsibilities. Unfortunately, leadership skills are not so much a matter of ability as they are a matter of attitudes. Dean Williamson made this pertinent comment, "We are not concerned so much with leading people as we are concerned with the interactions of people."

And so we must find the man who is willing and able to translate all of his skill, and of his training, into a type of behavior that will cause people to work with him.

The essential feature of leadership training is to help the individual understand himself and understand others with whom he is associated. How can a person through self-analysis, self understanding and self-development be what he needs to be? How can he as a leader help others to help themselves do something about their personality traits that are giving them difficulty? The ability to deal with the problems of human behavior is a necessary prerequisite for any successful manager. And it may well be that those problems of individual difference are even more accentuated in the supervisor-scientist relationship.

3. MOTIVATION

Perhaps it is in the area of motivational systems that the greatest difference between industrial and research supervision exists. At least it has been in this area that the greatest concern is being expressed by R & D supervision. The problem involves not only what it is that causes the scientific worker to want to do a good day's work, but what are the stimuli that influence the scientist in supervision to meet that kind of challenge. One feels that we have scarcely scratched the surface in arriving at sound basic conclusions on these problems. We need more basic research in the area of motivation studies.

Dr. Donald C. Pelz, Program Director, Institute For Social Research, University of Michigan, in discussing the topic "Motivating Scientific Personnel," identified several fundamental motivational questions. To what extent should scientists and engineers be organized to work in teams or as individuals? Should research laboratories be organized by project or by scientific disciplines? Should the supervisor of technical personnel work closely with subordinates, or should he adopt a "hands off" policy and see them only occasionally? There are obviously other incentives that influence the supervisor-scientist relations, but it is significant that team action in the scientific group is desirable and that effectiveness of the project group goes down if the group is kept the same for a long period of time. It is also apparent that the productivity of the individual and group are affected by the frequency and kind of supervision exercised, and the kind of associates the individual is in contact with from day to day.

4. COUNSELING - EVALUATION - DEVELOPMENT

Perhaps we have sensed that in this research and development organization there are more than an average amount of frustrating conditions which are causing serious personality problems. The conflict created by the changing beliefs and systems of the scientific organization have accentuated the personality difficulties of both the scientific worker and supervisor.

The skill of counseling the supervisor-scientist as discussed by Dr. Harold A. Edgerton, Vice President, Richardson, Bellows, Henry and Company, New York, has really two facets: (a) the need of the supervisor to be skilled in counseling with the scientific worker who is emotionally upset, and (b) the need of upper and middle management to be skilled in counseling with the scientific supervisor who may be emotionally involved. Both need help in gaining "insight" into their problems and professional psychological services are not readily available. As Doctor Edgerton pointed out, we need to provide, as much through the line organization as possible, "counseling to aid in understanding the scientist's role—his locus in dynamic organizational space—and the need to have better communications, less isolation, realistic standards of performance, and improved performance appraisal by both the scientist himself and by his supervisor."

THE CHALLENGE of Management Development in scientific organizations whets the imagination and at the same time causes thoughtful consideration as to what can be done. Both Lester P. Zerfoss, Staff Adviser for Executive Development, American Enka Corp., Enka, N. C., and Dr. David A. Emery, Manager Development Research Institute, General Electric Company, New York, N. Y., stressed that the essence of management development is to provide within the organization a "climate for growth" that will permit the scientist in management to achieve his reasonable management potential. Some fundamental elements in the achievement of this goal are:

1. Belief that management skills *can be learned* and that they *can be profitably applied.*
2. Top management has a sincere interest not only in the development of *others* but of *themselves* as well.
3. Desire by top management to define objectives and policies so that subordinates may actively participate in management planning.
4. Select the best people for advancement and provide challenging experiences for self-development in the present work situation so that they can earn the right of promotion.
5. Set high standards of leadership as a manager and encourage sound thinking and efficient work habits in subordinates.
6. Recognize that management skills can best be achieved through a sound program promoting a spirit of communication, consultation, participation, and teamwork within the work group.
7. Provide a continuing personnel development program for appraisal, review, discussion, development and inventory of the scientific group which have demonstrated a management potential.

It brings into focus the two most important forces in the employee's development: (a) a recognition of and concern for his own growth needs, and (b) the mutual understanding between himself and his own immediate supervisor as an active partner in helping him reach agreed upon development goals.

There is certainly nothing here to indicate that the problems of development of the scientific supervisor are different from other groups. It pinpoints the fact that all of the basic skills and art of management must be applied well to the scientific group. If the techniques of management controls, the art of communication, the ability to delegate, the need for the clinical approach, and the understanding of human behavior are not thoroughly mastered in the research and development organization, the same kind of difficulties will inevitably occur that would happen in any other like situation. There is little doubt that the scientifically trained person has the ability to master these skills. The problem essentially is this: Does he really want to do so? This, too, is a matter of individual difference.

GROUP REACTION TO THE SEMINAR

This discussion of the seminar would be incomplete without some evaluation of the reaction of the group to the program. We maintained during the seminar a Daily Reaction Chart which acted as a barometer of how the group was feeling about its program and surroundings. This quickly reflected any serious group reaction while something could be done about them. At the end of the program, we asked everyone to complete the Semi-

nar Evaluation Report for the program as a whole. The excellent cooperation in answering the questions quite frankly and completely has been of great value in planning for future seminars.

THE GROUPS were asked whether they felt the seminar was worthwhile and should be continued another year. There was unanimous agreement that they were worthwhile and should be offered again. This reaction reflects what was quite evident throughout the seminars; that the problem of management development in the scientific organization is a matter of serious concern at this time. Approximately 70% of those attending this year's seminar expressed interest in attending a similar program next year. They indicated that their interest in further development rested principally in the areas of motivation, communication, counseling, appraisal, and leadership. The general reaction has been that the subject matter has been pertinent to the specific needs of the individuals in their organization. One of the satisfactions of working with this type of group has been the unusually high morale. The seminar group this summer thoroughly enjoyed working together, enjoyed their workshop discussions, and had a good time together in their informal meetings. Group singing was popular and they really put on a terrific show at their picnic and banquet. They were "good Joes" who disproved the theory that scientists are very formal and reserved. We had questioned the desirability of group singing as a morale builder, but found they entered into it with more zest than many groups that are supposedly less inhibited.

The answers to the question "What do you feel you have gotten from the seminar?" well expresses the reaction of the individuals to the program. The quotes, which are given below, also reflects some of the real philosophy of R & D Management Development!

1. "A more mature view of 'effective' management principles and a philosophy of modern management."
2. "That the approach to management should be primarily through helping personnel develop, rather than putting work accomplishment as the chief objective."
3. "A better appreciation for the difficulties and problems of administration, and the need for good, sound management at all levels in any given organization."
4. "A better feeling of how I fit into the management structure and what my responsibilities are both downward and upward."
5. "An excellent refresher course in engineering management, and it has indicated areas in which I need to improve as a supervisor."
6. "A very good feeling for solutions to human relations problems."
7. "I have been made to realize that I have not been doing the supervisory job which I expect from my supervisors and therefore have not been getting through to my subordinates."
8. "I have gained some fine new friends and learned that my problems are not uniquely mine alone."
9. "I believe the seminar has provided an environment in which I can evaluate myself and find the areas in which I can improve myself."
10. "Emphasis has been placed on managerial areas in which I had not previously realized I had been participating."
11. "It has given me the opportunity to listen to people who have given much time and intense study to good management principles. With proper application these principles are effective in industry and I see no reason why I cannot apply them in my own job. I shall try."

FUTURE PLANS

The need for the kind of service that this or similar types of seminars can provide Research and Development organizations is very evident. The necessity for training supervisors capable of managing research and engineering projects, departments, or operations is a challenging and pressing problem. Industrial and governmental research organizations are looking to the universities for assistance. We feel at Penn State that our experience warrants continuing the program in the future. We are also giving careful consideration to the possibility of some further program for those who have attended previous seminars. Whether the program of the future will continue as strictly a part of the summer seminar's activity, or will be conducted at some other time of the year, has not been determined. The short seminars are intended primarily to help orient and stimulate management to think more about what they can do about their problem of supervision back home. There may be the need for more specialized assistance in the form of other courses, workshops or seminars to meet further requirements of the organization. Some of these can best be achieved through in-plant training. By working closely with your colleges or universities, educational assistance is available. Since education is our business at Penn State we hope that we may be able to serve you in many ways. ■

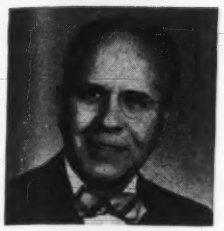
ONE sometimes hears the financial man described as a "pennypincher" or as the "watchdog of the treasury". To the extent that this means the financial man should try to ward off unjustified raids on the treasury, it is apt. Often, however, it is said with the implication that the financial man abhors spending per se. In this sense, it is calumny.

As should be quite clear from what has been said before, the financial man should be just as anxious to spend when spending is profitable as he is reluctant to see money spent unwisely. It is just as much his duty, in other words, to promote—and, indeed, to originate—expenditures that should be made as to resist those that should not be made. His role in spending should be active as well as passive.

Alvin Brown,
Financial Approach to Industrial Operations

TELL me today what the philosopher thinks, the university professor expounds, the schoolmaster teaches, the scholar publishes in treatises and textbooks, and I shall prophesy the conduct of individuals, the ethics of businessmen, the schemes of political leaders, the plans of economists, the pleadings of lawyers, the decisions of judges, the legislation of lawmakers, the treaties of diplomats, and the decisions of state a generation hence.

The Foundation for Economic Education, Inc., Irvington-on-Hudson, New York



University Division Observations

by Professor Harold Fischer
Vice President,
University Chapter Division

PROFESSOR RALPH C. DAVIS in his classical "Industrial Organization and Management" states: "Management is a leadership function. Its performance is based on inexact social sciences, as well as the exact physical sciences. Scientific management is not a complicated, theoretical and costly system. It is an approach which seeks to apply the logic of effective thinking, based on a management science, to the solution of business problems."

University Chapter Performance Reports continue to reveal the results of good organization, planning, and control. Yes, more and more of our members are learning by doing. The opportunity for creative thinking, individual initiative, and constructive leadership are unlimited.

Boston University, Sacramento State College, Villa Madonna College, the University of Wisconsin-Milwaukee, and *New York University, School of Commerce, Day Division Chapters* moved into the "first ten" circle for the second report period. Competition is becoming keener as our chapters accelerate their movement forward with better and more diversified activities.

"Ready for Business" is the title of the attractive booklet of the *University of Chattanooga Chapter* that contains a picture and brief biographical sketch of each graduating senior. *New York University, School of Commerce, Day Division Chapter* sponsored a ribbon-cutting ceremony on March 9 for the opening of their 8th Annual Management Show which was an outstanding event and attracted many people. Members of the *University of Missouri Chapter,* on their visit to Hallmark Cards in Kansas City, were given a guided tour through the plant and a fine luncheon. The members later attended the Kansas City Industrial Engineering Conference and were much impressed by the activities of the *Kansas City Senior Chapter,* the reason more and more graduating seniors continue their affiliation with S.A.M.

The *Drexel Institute of Technology Chapter,* in a recent article pointed out so effectively the many advantages of membership in S.A.M: "The individual member of S.A.M is presented with the opportunity for well-rounded development in the field of management, not only by taking what the Society has to offer, but also by contributing his own ideas. Through the media of publications, meetings, and personal contact with other members, a S.A.M member is able to acquire a vast amount of the newest information concerning techniques, procedures, and methods. Through writing, speaking, and round-table discussions, he is able to express himself. Through the constant development of his management philosophy as he progresses in his profession, he becomes equipped to aid in the improvement of relations with other managers and executives within and outside of his own organization. All of these enhance the broadening of his outlook, the reliability of his judgment and the quickening of his personal accomplishment, as well as enable him to enrich himself through new friendships, prestige, and opportunity."

"S.A.M Helps To Steer Careers" was the headline of a large and well-prepared article in the Wilkes-Barre Sunday paper of February 15 by the active *Wilkes College Chapter.* "What a student is to be, he is now becoming; and contributing to this development, both during and after college, is S.A.M". *Jake Zook, Dave Compton, Professor Allen Bacon,* and the student officers and members, along with the *Northeastern Pennsylvania Senior Chapter* (*Stringham, Hertig* and associates), are showing the results of cooperation and fine leadership in their expanding program.

The *Chicago Senior Chapter* likewise contines to provide inspiration and assistance to their student chapters at the University of Illinois, Roosevelt, DePaul, and Loyola Universities. They maintain a speaker service for the chapters, hold two conclaves each year for officers and advisors, provide an impressive trophy to the local chapter with the highest number of points in the Performance Awards contest (University of Illinois Chapter ahead on March 15), arrange plant visitation trips and last Spring held a one-day job counseling clinic with 15 specialists in all phases of industrial activity serving as counselors. Thanks to *Henry Arends, Charles Waindl, J. Alan Ofner,* and the entire group for this outstanding service to the University program of S.A.M. management education, and the development of management men.

We are looking forward to the annual joint dinner meeting of the *Washington Senior Chapter* on April 22 with the University Chapters under their sponsorship: *American, George Washington* and *Georgetown Universities* and the *University of Maryland.*

C. Norman Draper and his committee are doing a great job in maintaining a constant liaison with these University Chapters and their programs and activities reflect this cooperation, as well as the leadership of the student officers and faculty advisors.

The *Cincinnati Senior Chapter* is also playing an important part in the University Program through their outstanding support of the chapters in their region. To President *Paul W. Christensen. Jr., Lee Huntley, Edward Berghausen,* and the entire group in the *Cincinnati Chapter,* we pay tribute for their contribution to the successful operation of *Villa Madonna College Chapter,* along with the student chapters at *Miami University, the University of Cincinnati, Xavier University,* and the *University of Kentucky.*

On our visits to Northeastern Ohio and in the presentation of charters to *Dean Stanley C. Vance of Kent State University, Dean Wenzil K. Dolva of Western Reserve University,* and *Dean Warren W. Leigh of the University of Akron,* we were stimulated by the fine spirit and enthusiasm that greeted Mrs. Fischer and the writer. With the support of the administration and with the fine cooperation and help of the *Cleveland Chapter,* the student officers and faculty advisors, we anticipate a bright future for each of these new groups. We are indebted to *Fred Harrell, Dr. J. N. Berrettoni, Joe Schaffer, and William Yurkowsky* of the *Cleveland Chapter* and all others who made this trip so pleasant and significant.

"Successful operation of a student chapter is a managerial challenge in itself which early develops executive ability and self-confidence in both officers and members. S.A.M is a good investment" writes Frank Luken in the S.A.M REPORT of *Villa Madonna College Chapter.* They really believe it, as evidenced by their tremendous rise in membership and performance rating.

"THE FUTURE BELONGS TO THOSE WHO PREPARE FOR IT"—Al Seares, President, National Sales Executives. ■

PERFORMANCE AWARDS REPORTS

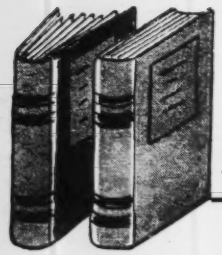
Standing as of the Second Report—March 15, 1959

Congratulations! "They Planned Their Work—They Worked Their Plan"

Boston University	2790	Kansas State Col.	1595
American Univ.	2740	Univ. of Penn.	1520
Rider College	2725	Santa Maria Catholic Univ. of Puerto Rico	1515
Univ. of Kansas	2685	Duquesne Univ.	1510
Univ. of Pittsburgh	2620	Univ. of Wisconsin —Madison	1480
Ohio University	2560	Univ. of Detroit	1435
Sacramento State College	2530	Drexel Inst. of Technology	1400
Villa Madonna College	2530	Univ. of Okla.	1400
Univ. of Wisconsin-Milwaukee	2500	Univ. of Florida	1390
N. Y. U.-Sch. Comm. Day Div.	2485	L. A. State Col.	1375
Univ. of Houston	2465	Syracuse Univ.	1330
Franklin and Marshall Col.	2450	Clemson College	1320
Univ. of Illinois	2425	DePaul Univ.	1300
Boston College	2405	Univ. of Alabama	1275
Mississippi State University	2395	Bowling Green State Univ.	1220
LaSalle College —Evening Div.	2340	Univ. of Maryland	1175
Babson Institute	2290	Penn. Military Col.	1165
Univ. of Tennessee	2260	Penn. State Univ.	1165
Clarkson College of Technology	2215	W. Carolina Col.	1110
Univ. of Conn.	2195	Tennessee Polytechnic Inst.	1075
Indiana Univ.	2175	St. Norbert Col.	970*
Georgia Institute of Technology	2170	Guilford Col.	945
George Washington University	2165	Wash. State Col.	930
Alabama Plytechnic Institute	2135	Kent State Univ.	825†
San Diego State College	2115	Rutgers Univ. N.B.	795
Univ. of Minnesota	2100	Wayne State Univ.	770†
Temple University —Evening Div.	2095	Memphis State University	730†
Loyola University of Chicago	2040	Univ. of Baltimore	670†
Roosevelt Univ.	2005	Rennselaer Polytechnic Inst.	665†
Univ. of N. Dak.	1965	Univ. of Richmond	660
San Jose State College	1930	St. Peter's School of Business—Hudson Col.	540†
Univ of Omaha	1865	Univ. of Rhode Island	535
Univ. of Arkansas	1860	C. W. Post College L. I. U.	470†
Univ. of Miss.	1860	Butler Univ.	460†
Univ. of Missouri	1795	Cornell Univ.	450†
Univ. of Mich.	1790	Univ. of Chattanooga	430†
Univ. of Calif.—Berkeley	1725	St. John's Univ.	425†
Ohio State Univ.	1660	W. Mich. Univ.	365†
Miami Univ.	1645	Wilkes College	365†
Univ. of Bridgeport	1620	Temple Univ. Day Division	350†
Villanova Univ.	1600	Georgetown Univ.	295†

* Newly chartered.
† One report only.

Wilkes College Chapter President Receives Membership Cards from Senior Chapter Officers. Left to right: Edward B. Stringham, Executive Vice President, Northeastern Pennsylvania Chapter S.A.M; **David Compton,** Student President, Wilkes College Chapter; and **Franklin L. Hertig,** President, Northeastern Pennsylvania Chapter.



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The second edition, brought up-to-date, of a basic book on all aspects of capitalizing a business. Covers effects of taxes, market conditions and the relative merits of various types of available financing.

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A series of papers explaining the criteria and methods used by commercial banks in evaluating and making business loans.

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A thorough review of both the principles which govern various types of property insurance and the specific coverages and rates which apply. Gives comparative information on various rules and rates in different parts of the United States.

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An historical review of the development of U. S. fighting planes and missiles from the earliest days of the Army Air Force to present advanced intercontinental weapons. Amply illustrated.

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TYPICAL S.A.M CHAPTER ACTIVITIES—MAY 1959

CHAPTER	SUBJECT	SPEAKER	PLACE	DATE
Alabama	"The Kohler Story"	**L. S. Smith,** Exec. VP, Kohler Company, Kohler, Wisc.	Gulas Restaurant	12
Binghamton	"Proving and Improving Industrial Engineering Performance"	**Robert W. VanHouten,** Pres., Newark College of Engineering	Sheraton Hotel	13
Boston	"The Problems of Changing Jobs"	**Mrs. Evelyn Yates,** Director, M.I.T. Placement Bureau	M. I. T. Faculty Club	7
Bridgeport	"Effective Industrial Relations"	**Lawrence Appley,** Pres., American Mgmt. Association	Algonquin Hotel	5
Central Pa.	"Management Performance Standards"	**J. B. Joynt,** VP, New York Central System, New York	Camp Hate-To-Leave-It	14
Chattanooga	Ladies' Night—"We Say—They Say—Hearsay"	**Dr. Neal Bowman,** Staff Speaker, National Association of Manufacturers, New York	Read House	21
Chicago	"Key Factors In Practical Long Range Planning"	**W. E. Roberts,** Exec. VP, Bell & Howell Co., Chicago	Furniture Club of America	26
	Workshop—"Evaluated Comparisons of Job Evaluation Plans"	Moderator—Representative of Seyfarth, Shaw, Fairweather and Geraldson	Furniture Club of America	19
	"The Employment Agency"	**Phyllis Erwin,** Personnel Mgr., Field Enterprises, Inc.	Furniture Club of America	18
		Fred Lauth, Personnel Dir., Helene Curtis Industries, Inc.		
		Dr. Louise Paine, VP, Star Employment Service, Inc.		
		Eugene Shea, VP, Cadillac Associates, Inc.		
	"Analog Computers and Operations Research"	**Albert S. Jackson,** Cornell University	Hardings Presidential Grill	5
	Fifth Annual Midwest Production Control Conference		Congress Hotel	21
Dallas	"Facts From Our S.A.M Workshop Seminars"	**Norman V. Benedict,** Supervisor of Personnel, Core Laboratories, Inc.	Melrose Hotel	13
Detroit	"Indirect Labor Control & Budgeting"	**Baylor Sutton,** Fisher Body Division	Engineering Society	19
	Annual Clinic (Full Day)		Engineering Society	22
Fox Valley	"Scientific Management Applied to Small Business"	**Richard H. Moon,** VP, Mfg. Lakeside Mfg. Inc., Milwaukee	Beaumont Hotel, Greenbay	14
Greensboro Area	Annual Ladies' Night		Plantation Supper Club	8
Greenville	"Executive Communication-Management's Neglected Opportunity"	**C. J. Dover,** Consultant, Communication & Group Relations, General Electric Co., New York, N. Y.	Elks Club	18
Hartford	"New Product Development"			21
Knoxville	Plant Visitation		Foote Mineral Co.	26
Lancaster	"Tensions in Management"	**Dr. Harry J. Johnson,** Director, Life Extension Foundation, Inc.	Hotel Brunswick	19
Lehigh Valley	Annual Ladies' Night—"Space—A Challenge to Management"	**D. E. Mullen,** Sales Engr., Missile & Ordnance Systems Dept., General Electric Co.	Walp's Restaurant, Allentown, Pa.	5
London District	Annual Meeting—Election of Officers and Directors and Film Presentation		Hook's Restaurant	21
Long Island	Social—Ladies' Night			25
Los Angeles	"Mass Communication in Advertising"			21
Madison	"Concepts of Selling"	**J. A. McInay,** VP, Sales, Ray-O-Vac Company	Cuba Club	6
Milwaukee	"The New Look in Industrial Engineering"	**Warren E. Alberts,** VP, Industrial Engrg., United Air Lines	ESM Building	14
Montreal	"Inventory Control Techniques"	**K. Belbeck,** Staff Consultant, Stevenson & Kellogg, Ltd., Toronto	Ritz-Carlton Hotel	13
Nashville	Ladies' Night	**Hugh Comer,** Board Chairman, Avondale Mills, Sylacauga, Alabama	Hermitage Hotel	14
New Haven	Ladies' Night—Annual President's Report	**Walter F. Wehner,** Chairman	Green Dolphin, Cheshire	14
No. Alabama		**Walter S. Buckingham,** Professor of Ind. Mgmt., Georgia Inst. of Tech.	Hotel Russel Erskine	14
N. New Jersey	Dinner-Dance		Rock Springs Country Club, West Orange, N. J.	23
	Spring Conference—"Operation Sick Plant —A Diagnosis & Treatment"		Hotel Suburban, E. Orange	19
N. E. Penna.	Panel Discussion—"Employee Motivation"		Twin Grill, Wilkes-Barre	5
Philadelphia	"Developing Performance Standards for Managers"	**John B Joynt,** VP, Mgmt. Planning, New York Central System, New York		5
Pittsburgh	"Can We Have Sound Social Security?"	**A. C. Adams**	Penn-Sheraton Hotel	21
Providence	"Materials Handling"	**Frank R. Weber**	Johnson's Hummocks	7
Raritan Valley	"Modern Trends In Selecting a Plant Location"	**Aime C. Carkhuff,** Industrial Realtor, Newark, N. J.	Roger Smith Hotel	20
Reading	"Most Effective Utilization of Work Measurement Dollars"	**George E. Kane,** Asst. Prof., Dept of Ind. Engrg., Bethlehem, Pa.	Nick's Chat-A-While Inn	11
St. Louis	Student Night	**Lee E Kimball,** S.A.M Student Coordinator		26
Wash., D. C.	Field Trip		Chevrolet Plant, Baltimore	20
W. Mass.	Eighth Annual Spring Conference		Storrowton Inn	20
Wilmington	"Better Management Control"	**John S. Sayer,** Section Mgr., Engrg. Dept., E I. duPont de Nemours	Lord De La Warr Hotel	12